

To the extent that an impact fee system results in a more predictable and fairer system for imposing infrastructure capital costs and securing development approvals, costs associated with development uncertainty may be reduced as compared with alternatives that operate on a project-by-project basis such as proffers or ad hoc exactions. Additionally, a “one stop” impact fee system can greatly reduce the time involved with permitting as well as compliance costs. If the alternative is additional reliance on regulatory APF programs, impact fees will tend to have less effect on costs and prices. If the alternative is broad based taxation, impact fees will have greater effects on costs and prices.

5.05 IMPACT ON AMOUNT AND PATTERNS OF LAND DEVELOPMENT

Because impact fees increase development costs, they would be expected to have an effect on where and how land is developed. For example, other things being equal, if impact fees are imposed in one jurisdiction but not in a neighboring jurisdiction, one would expect the jurisdiction without the fees to experience more development. If higher impact fees are imposed in one jurisdiction than in another, all else being equal, developers will tend to favor the jurisdiction with the lower fees. Of course, all else is not always equal, and if the jurisdiction without impact fees instead imposes other less predictable forms of exactions, or compensates for a lack of sufficient infrastructure by denying or scaling back development proposals, a developer may view the impact fee as the “lesser evil.”

5.06 IMPACT ON HOUSING AFFORDABILITY

To the extent that the imposing impact fees serves to increase the market price for new construction, prices may also rise for existing development or for new development in areas not subject to the impact fee.⁶² Market prices for new and existing homes are a result of competition between the two. When the cost of new construction rises, existing homes become increasingly preferred. As demand shifts away from new to existing homes, the prices of existing homes will be bid up until relative equilibrium is re-established.

Results of an empirical study in Illinois show that impact fees increase the price of new and existing homes.⁶³ Thus, they have a direct negative effect on housing affordability. At an extreme, impact fees could be set so high that more affordable housing development becomes unprofitable (and thus not built), while more expensive housing developments could still be profitable.⁶⁴

5.07 SUMMARY OF PROS AND CONS

There are a number of advantages to well-devised impact fee programs and a number of disadvantages, particularly, to those that are not well founded.

PROS:

- Impact fees help communities pay for the infrastructure required to support new development projects, without forcing elected officials to levy new taxes on the public as a whole;
- Impact fees create a situation where new development arguably “pays its own way”;
- A well-devised impact fee system can add speed and predictability to the development process, as compared to negotiated exactions;⁶⁵

⁶² National Association of Industrial and Office Properties National Growth Management Task Force, *Growing to Greatness: A Growth Management Manual* at 39 (NAIOP, 2000).

⁶³ Baden at 46.

⁶⁴ American Planning Association at 8-133.

⁶⁵ Nelson and Duncan, at 123.

- Properly created and applied, impact fee systems can attribute specific costs to specific developments in a rational and predictable manner.

CONS:

- An impact fee requirement increases the costs of new development, especially for residential projects and consequently may reduce the number of projects that are economically feasible.
- The increased costs resulting from such impact fees may make it harder for low-and-moderate income households to afford to purchase residential units in new developments. Impact fees can also result in higher prices for existing homes, thus making all homes less affordable.
- Impact fees may be favored by local officials and residents who see them as a mechanism for keeping their own taxes low by passing on government expenses to new residents who do not yet have a voice in the community;⁶⁶
- Impact fees can result in double taxation for buyers of new houses. In many cases, those who are forced to pay impact fees to secure their building permits pay not only for their new public facilities, but also for facilities serving existing residences and businesses. The reason is that, in addition to incurring impact fees as a cost of their new housing, these residents also pay regular taxes at sufficient levels to pay for the same or other facilities used by existing residents that are financed through general revenues.⁶⁷
- Impact fees are an unstable source of funding since they depend directly on new housing starts.

5.08 INCENTIVE-BASED ALTERNATIVES

Impact fees themselves can be used to create incentives to encourage development to locate in areas with facilities that are less costly to serve. For example, San Diego is a jurisdiction that encourages growth through the use of lower impact fees in areas already well-served with public facilities, and discourages growth through the use of higher impact fees in areas lacking infrastructure.⁶⁸

⁶⁶ *Id.* at 8-133.

⁶⁷ South Carolina Policy Council, *Assessment of Impact Fees as Means of Financing Government Infrastructure* (1997).

⁶⁸ Nelson and Duncan at 123.

SECTION 6: SPECIAL ASSESSMENT DISTRICTS (SADS)

6.01 PURPOSE AND KEY TERMS

A **Special Assessment District (SAD)** is a sub-area of a community designated by ordinance to assess a tax for the construction or installation of public facilities that directly benefit the property owners within that district.⁶⁹ Also known in various states as **Local Improvement Districts**, **Special Benefit Districts**, or **Benefit Assessment Districts**, SADs are a means of paying for improvements over a period of time through proportionate assessments on benefiting properties.⁷⁰

A “special assessment” is a dedicated tax on real property used to defray all or part of the cost of a public improvement. The assessment is apportioned according to the estimated benefit that will accrue to each property. This apportionment based on the projected benefit to the individual property is the distinctive feature of a special assessment. This feature distinguishes SADs from property (or “ad valorem”) taxes levied for the purpose of collecting general revenues that permit the local government to fund a variety of programs and projects throughout the locality.⁷¹

An SAD is distinguishable from a Special District. A Special District is a limited-purpose unit of local government created to carry out a specific function, such as the provision of sewer or storm drainage facilities.⁷² A special district is accorded full power to provide the service for which it is created and, as such, is authorized to tax, issue bonds, and to enter into contracts for service. A SAD, on the other hand, is generally not independent of the government that creates it. It is a designation for a cluster of properties that are subject to a special assessment for the purpose providing a specific benefit.⁷³

Despite those differences between an SAD and a special district, the two are similar in effect. They are discussed in this section interchangeably for purposes of evaluating their effectiveness at financing public improvements, since both of these mechanisms provide local governments with a means of separately financing improvements within a limited geographic area. In fact, a 1992 Urban Land Institute (ULI) report on Special Districts noted that independent districts like SADs, “are increasingly important for the provision of infrastructure.”⁷⁴

Finally, an SAD or a Special District, in this context, should not be confused with a “Special Zoning District” which is a name given to districts created by municipalities under the zoning powers to implement flexible site-specific development regulations. These types of regulatory districts are

⁶⁹ See definition of “Special Benefit District” in Michael Davidson and Faye Dolnick, eds., *A Glossary of Zoning, Development, and Planning Terms*, Planning Advisory Service Report Nos. 491/492 at 213 (American Planning Association 1999).

⁷⁰ Municipal Research and Services Center of Washington, “What is a Local Improvement District?” Chapter in *Local Improvement District Procedural Outline* (<http://www.mrsc.org/pubworks/lidoutl.htm#whatlid>). The Trust for Public Land has established on its website a “Matrix of Local Finance Tools” that does a good job of explaining the full variety of these types of financing mechanisms, albeit in the context of establishing parks. (http://www.tpl.org/tier3_cdl.cfm?content_item_id=1071&folder_id=825).

⁷¹ National Association of Home Builders, “Stage III: Assess Financial Resources,” an excerpt from *Building Together: Investing In Community Infrastructure*, produced jointly by the National Association of Home Builders, the National Association of Counties, The Urban Land Institute, the Lincoln Institute of Land Policy and the Government Finance Officers Association. (http://www.nahb.net/growth_issues/fiscal_impact/growth_stage_III.html).

⁷² *Id.*

⁷³ *Id.*

⁷⁴ Douglas Porter, et al., *Special Districts: A Useful Technique for Financing Infrastructure*, at v. (Urban Land Institute, 1996).

variously referred to as “Special Design District,” “Special Area Protection District,” “Special Purpose Development Districts,” “Special Development Review District,” and “Special Mixed Use District.”⁷⁵

6.02 EFFECTIVENESS IN ACHIEVING STATED PURPOSE(S)

The principle behind an SAD is straightforward: If a segment of the community desires to have infrastructure beyond that provided by the local government, it should foot the bill. For example, an SAD may be created to provide a centralized water system to replace individual wells. These districts allow local control over spending because the money can only be used for specific projects, so they are generally well-suited to meet their designed purpose. They also are an available source of revenue for tax constrained areas, such as California, after Proposition 13, where communities may be unable to provide basic infrastructure improvements out of general tax revenues.

SADs and Special Districts are enabled in at least 24 states,⁷⁶ and go by various names, such as Municipal Utility District (Texas) and Mello-Roos District (California). The ULI reports that according to the 1987 Census of Governments, 29,427 independent special districts were active in the United States, representing over one-third of all local government entities providing public services. The ULI also noted that no census was taken of dependent Special Districts, which, it concluded, must number in the tens of thousands and also provide important services.⁷⁷

Although SADs vary in their details, they have several principles in common:

- The use of a Special Assessment enables a group of property owners to pay for a public facility that specially benefits them. Since individuals will not necessarily agree on the value of the project, the process for establishing a district also includes a process for considering objections to its establishment from among those to be charged.
- The assessed cost is distributed among many property owners according to the proportionate benefits to each owner’s land.
- Standards for the public facilities are established by the governmental unit responsible for their future operation and maintenance. Each project is usually part of a larger system that must be functionally adequate for the entire community.
- The facility is built in accordance with a final, permanent standard. Property owners are not easily persuaded that a new special benefit is received from reconstruction of a project that is already in place.
- A developer may be granted the privilege of special assessment financing for facilities that the developer would otherwise pay for directly. Using the lower interest rate on municipal borrowing reduces the developer’s cost. Some units of government either do not allow, or place limits, on this use of special assessment.

⁷⁵ See, e.g., Edward H. Ziegler, Jr., “Shaping Megalopolis: The Transformation of Euclidean Zoning By Special Zoning Districts and Site-Specific Development Review Techniques,” Chapter 3 in Kenneth H. Young, Ed., 1993 *Zoning and Planning Law Handbook* (Clark Boardman Callaghan, 1993).

⁷⁶ “Figure 16: District Powers in Selected States and Districts,” in Porter at 19.

⁷⁷ Porter at 1.

- State enabling legislation typically establishes when, where, how and by whom an SAD can be formed and administered. Generally, the establishment of an SAD is subject to a vote of affected property owners.⁷⁸

The procedures under which an SAD is established are usually very detailed and must be followed carefully in order for the district to survive challenge. The *Florida Special District Handbook*, published by the Florida Department of Community Affairs describes the process for establishing a special district in Florida.⁷⁹

In 1981, Burlington, Vermont created a redevelopment district to bolster its downtown, the Church Street Marketplace. Administered by a city agency and funded by a special assessment based on a combination of frontage on Church Street and overall building square footage, the district is considered a success. During its first five years, the assessment basis was considered equitable, but as adjacent areas of downtown rebounded, equity issues surfaced. For example, property on streets perpendicular to Church Street paid no fees, but arguably benefited from spill over success. These and other issues caused the city to periodically reexamine the boundaries and management of the SAD.⁸⁰

A report by the Planning and Conservation League of California credited benefit assessment districts in that state with enhancing that State's quality of life by providing residents with necessary police, fire, public transportation, roads, flood control, sewer lines, libraries, parks, open space, and economic development efforts. The use of this technique generated \$304 million in revenue in 1992-93, up from \$28 million only 15 years earlier.⁸¹

6.03 IMPACT ON PROPERTY VALUES

If the SAD assessment truly reflects the benefit accruing to the property from the infrastructure provided, one would expect there to be little positive or negative impact on property values from the creation and implementation of a SAD. To the extent that the use of a SAD makes it possible to develop property that it would not otherwise be feasible to develop to the same extent, the SAD may increase property values within the district, all else being equal. Shifting costs to new development will tend to decrease property values, but making infrastructure available will tend to increase property values.

6.04 IMPACT ON DEVELOPMENT COSTS

SADs should have no direct impact on development costs, except to the extent that they make possible the provision of necessary infrastructure as a shared expense (i.e., shifted to future owners) that would otherwise have to be brought to the site at the developer's cost.

⁷⁸ Bureau of Governmental Research and Service, School of Community Service and Public Affairs, University of Oregon, *Financing Local Improvements by Special Assessment*, BGRS No. 82-1 at 4 (January 1982).

⁷⁹ Available at <http://www.dca.state.fl.us/fhcd/programs/sdip/Handbook/handbook.pdf>. To see how California's Proposition 218 affects assessment district procedures see "Special Assessments," Chapter 3 in *A Planners Guide to Financing Public Improvements* (California Governors Office of Planning and Research, June 1997) (<http://ceres.ca.gov/planning/financing>).

⁸⁰ "Church Street Marketplace, Burlington, Vermont," Urban Land Institute Development Case Study No. C016013 (1986).

⁸¹ <http://www.pcl.org/store/benereport.html>.

6.05 IMPACT ON AMOUNT AND PATTERNS OF LAND DEVELOPMENT

SADs can make it possible to provide infrastructure and services to areas that might not otherwise receive public investment, thereby potentially opening up new areas to growth or allowing faster growth in developing areas.

6.06 IMPACT ON HOUSING AFFORDABILITY

The amount of the special assessment will be assumed by homeowners in the district as an increased cost of housing. The effect on housing prices is more difficult to predict. Depending on market factors, the effect of this additional assessment, all else being equal, may be to reduce housing demand and consequently prevent higher housing prices in the affected area. However, in places where SADs are not common, consumers are frequently unaware of the existence of any obligation to pay SAD charges, despite disclosure requirements, and do not show market resistance to such districts. In places where SADs are common, consumers are aware of the districts, and their costs are factored into the prices consumers are willing to pay. This market resistance tends to capitalize future SAD charges as lower prices, which will tend to be borne by builders and developers.

6.07 SUMMARY OF PROS AND CONS

PROS:

- SADs can provide important services in areas where local governments have limited financial and/or administrative capabilities.⁸²
- The creation of SADs offers the government an opportunity to avoid increases in property taxes, thereby avoiding public controversy⁸³ or legal constraints on the ability to raise tax levies.
- Because of their narrow focus, SADs allow greater control over spending for specific infrastructure projects than general fund revenues.
- If the purpose of the assessment is properly described and attainable, and the assessment itself is competently administered, all in the district proportionately share the burden of the tax and all would proportionately benefit from the eventually-constructed improvement.

CONS:

- Where there is a belief that the ability to construct new infrastructure is constrained by a city bureaucracy that wastes tax revenue, SADs, one argument goes, simply enable this dysfunctional system to consume dollars while producing less and less.⁸⁴
- To the extent that infrastructure and amenities serving new developments in the district are spread equally among all properties in the district, the system is unfair to existing users.
- When the assessments are limited to new developments, it may take decades for sufficient funds to accumulate and construct desired amenities.

⁸² Porter at 41.

⁸³ *Id.*

⁸⁴ Lisa D. Ross, "Special Tax Districts Are A Tough Sell: They Can Work If They Are Fair And Have A Well-Defined Purpose," *San Diego Union Tribune*, Thursday, July 27, 1995.

- Where fiscal oversight and control is inadequate, funds generated by the special assessment can be spent elsewhere.⁸⁵

6.08 INCENTIVE – BASED ALTERNATIVES

SADs are an alternative to the customary process of relying on funding from general public revenue sources to provide needed or desired infrastructure improvements. Under an SAD, infrastructure investments may be possible on a timetable that comports with market needs, whereas investment that relies on general revenue sources may not be able to count on those revenues being available at all or on a schedule that is predictable.

⁸⁵ *Id.* Ross relates the example of Carmel Valley, California Community Park FBA funds being spent by the city on a highway.

S. Mark White

**Adequate Public
Facilities Ordinances
and**

Please Return to :

American Planning Association - PAS
122 S. Michigan Ave., Suite 1600
Chicago, IL 60603 - 6107

6195



American Planning Association

Planning Advisory Service
Report Number 465

Chapter 3. Designing the Adequate Public Facilities Ordinance

This chapter illustrates the various policy decisions that must be resolved in the design and implementation of an adequate public facilities ordinance (APFO). In describing each policy issue, the discussion draws upon examples of concurrency/adequate public facilities legislation from various jurisdictions based upon a study conducted by the author for a jurisdiction in Florida and the preparation of a local concurrency management ordinance for Douglas County, Colorado. (See Appendices C and E.) By synthesizing the structure and mechanics of other programs, the reader will become familiar with the design, administration, and structure of APFOs. The author does not endorse the legality, equity, or administrative feasibility of any particular approach. Instead, the various approaches serve as examples of how other jurisdictions have addressed the issues associated with designing a concurrency management system.

Based upon the author's experience with the preparation of APFOs on a national level, the following issues have been identified as the most critical to the preparation of an APFO.

- *Determination of which facilities will be required as a condition of development approval.* In most jurisdictions, only roadways and intersections are evaluated for purposes of concurrency. In addition, facilities that can provide alternative modes of travel—such as public transit or pedestrian facilities—may also be evaluated or allowed as an alternative to the inclusion of roadways in the capacity equation.
- *The stage in the development process at which adequacy is determined.* The local government must determine the point or points in the development approval process at which a determination is made of whether facilities are adequate to accommodate the impacts of the development.
- *Developments or categories of development to which the APFO is applicable.* The ordinance should specify the categories of development that must seek an adequate facilities determination.
- *Exempt developments.* The agency should determine which, if any, categories of development are to be exempt from the ordinance. Exemptions create legal and administrative issues that are addressed in this chapter.
- *LOS standards.* An LOS standard is a measurement standard that describes the capacity and performance characteristics of each facility included in the APFO. The adopted LOS standard governs the rate and amount of development approvals, the quality of infrastructure, and the magnitude of capital investments for new facilities to correct existing deficiencies and to accommodate new growth. The agency should establish an LOS for each facility covered by the APFO.
- *Inclusion of state/federal facilities.* The ordinance should specify whether facilities funded and constructed within its jurisdiction by state or federal agencies—such as interstate highways—will be required as a condition of development approval and for compliance with the APFO.
- *Delineation of impact area.* The ordinance should delineate the geographic area within which facilities will be counted in the determination of facility capacity needed to serve the development.
- *Flexibility of impact area delineation.* The ordinance should specify whether the impact area will vary according to the type of development, type of facilities available, and geographic location, or whether the impact areas will be applied on a uniform basis for all types of development.
- *Administrative waivers.* If the jurisdiction wants to waive the application of the concurrency requirements for certain types of projects, it must determine whether the waiver will be granted administratively or through legislative action. The ordinance must include standards for waivers and assign decision-making responsibility.

- *Reservations of capacity.* As developments are approved or exempted, the demand for public facilities and services created by those developments will be "debited" or "charged" against available facility capacity. Accordingly, the ordinance should specify the duration for which facility capacity may be debited and should include other regulations governing capacity reservation.
- *Point system.* If the agency wishes, the ordinance can determine how the criteria for the measurement of facility capacity among all facilities will be weighted for purposes of development approval.
- *Official(s) responsible for conducting adequacy review.* The ordinance should make clear who is responsible for determining whether facilities are adequate to serve new developments.
- *Appeals process.* The ordinance should create a mechanism to handle appeals from decisions regarding project approvals, conditional approvals, and disapprovals, pursuant to the APFO.
- *Possibility for mitigation/abatement.* Developers denied approval under the concurrency provisions may want to advance those facilities needed in order to allow the project to proceed or to mitigate the impacts of the project on the relevant facilities and services. The ordinance should include criteria to evaluate a developer's willingness to advance facilities and developer-proposed mitigation measures, as well as regulations governing the reservation of capacity as facilities are advanced.
- *Differential LOS standards.* LOS standards may vary based on location, stage in development approval process, size of developments, or other criteria.
- *Developer reimbursement mechanisms.* Developers advancing and/or oversizing facilities in order to receive development approval or permission to build at an earlier date may seek reimbursement from the agency or other developers. The ordinance should set forth those situations where such reimbursement is necessary and, if so, how reimbursed amounts are determined, and a mechanism to effectuate the reimbursement.
- *Relationship of APFO to impact fees.* The ordinance should determine how facility capacity constructed from revenues derived from impact fees will be factored into the determination of adequacy for each developer.
- *Extent to which "planned" improvements are included in the determination of what constitutes adequate public facilities.* The ordinance should specify whether existing facilities will be used to determine whether development may proceed, or whether facilities that are planned in the CIP may be counted. The ordinance should also specify which projects may include developer-contributed facilities in the adequacy determination.
- *Effect of failing adequate public facilities test.* Projects may be denied or conditionally approved where

facilities are determined to be inadequate. The ordinance should stipulate whether projects will be denied or conditioned, and specify appropriate mitigation procedures.

- *Relation of adequate public facilities determination to development monitoring.* A procedure should be developed to determine the demand for public facilities included in the APFO, what types of development will be included when determining the demand on public facilities, and the frequency of evaluation.

APPROVAL STANDARDS

This section explains the substantive standards that form the basis of a concurrency management system. Matrices are included which explain how these standards are measured and implemented in jurisdictions that have adopted APFOs.

LOS Standards

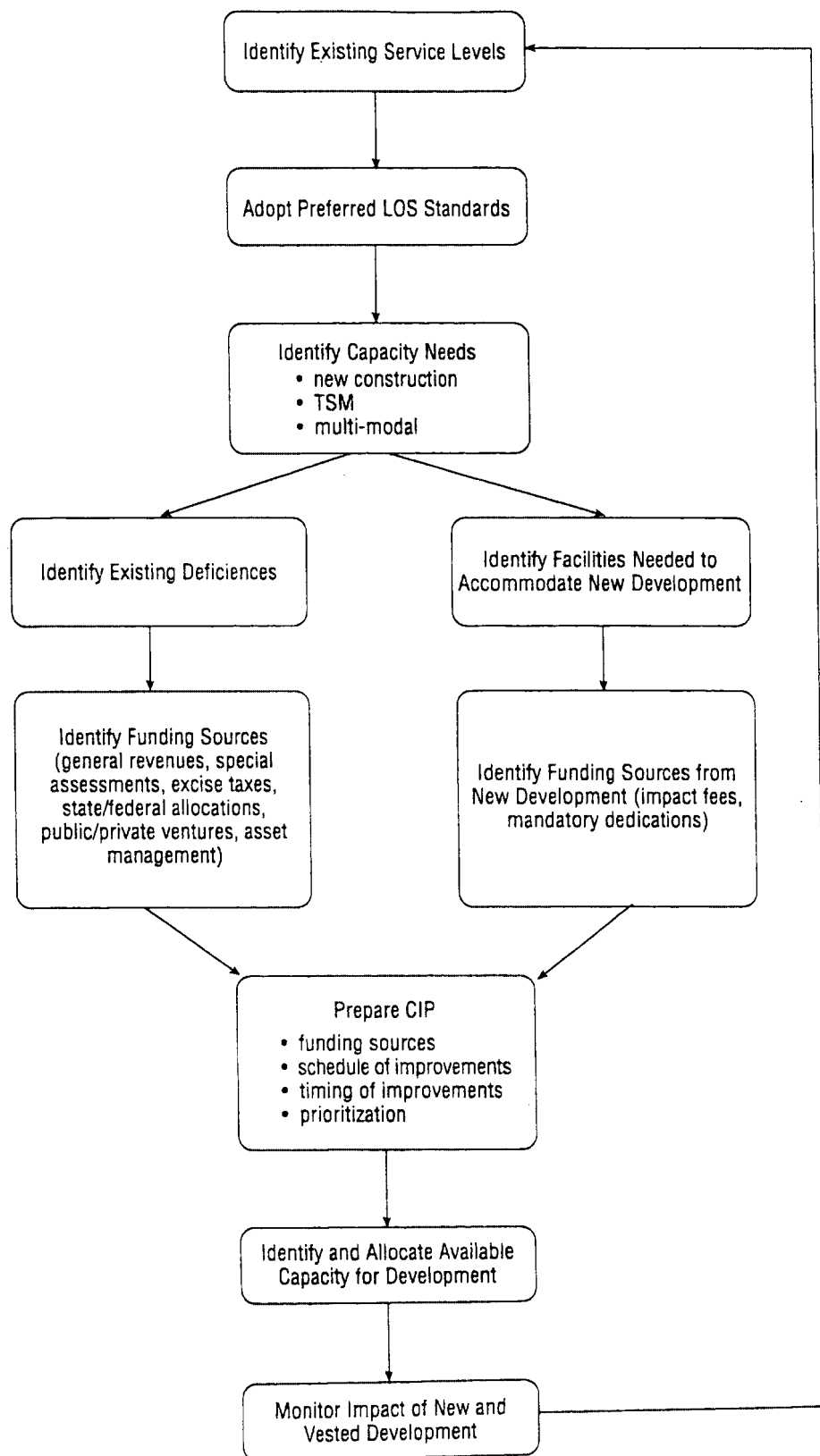
The cornerstone of a concurrency management system is the adoption of an LOS standard for transportation facilities. The Florida Department of Community Affairs defines LOS as follows:

"Level of service" means an indicator of the extent or degree of service provided by, or proposed to be provided by, a facility based on and related to the operational characteristics of the facility. Level of service shall indicate the capacity per unit of demand for each public facility. (Florida Administrative Code Sec. 9J-5.003(45))

As a means of measuring performance, an LOS standard should take into consideration both the capacity of a public facility and the demand currently placed and potentially placed on the public facility from existing development, approved developments, and projected future growth. By comparing the demand to the capacity of a public facility, local governments can determine how much of the capacity of a given facility may be allocated to development within a designated area following project approval.

The adopted LOS will govern the amount of growth and development allowed by the APFO and the level of public investment needed to achieve that standard. In addition, the LOS standard will determine the extent to which planned infrastructure capacity, as set forth in the CIP, is attributable to new growth as opposed to existing demand. As a condition of development approval, the costs of the former may be shifted to developers through impact fees and exactions, while the latter may be borne only through general funding sources. For example, if existing roadways are operating at LOS D, and the jurisdiction adopts an LOS standard C for concurrency, the local government cannot require a developer to upgrade the transportation network from D to C. However, if the local government adopts an LOS standard of D, a significant proportion of new capacity will be attributable to new development. The LOS will then provide a basis for adding new capacity to the transportation network and allocating

Figure 1. Concurrency Planning Process



The Transportation Research Board's *Highway Capacity Manual* (1985) defines LOS as a "qualitative measure describing operational conditions within a traffic stream and their perception by motorists and/or passengers." Traffic engineers rate roadway LOS on a scale ranging from A (free-flow conditions) to F (forced or breakdown flow). The *Highway Capacity Manual* generally defines LOS in terms of direct operational characteristics (e.g., speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety). Density (passenger cars per lane-mile) and speed are the parameters used by the Board to describe the performance characteristics of roads.

At the development permitting stage, it is difficult to link a specific development proposal to a change in speed for a particular roadway. However, traffic engineers can compute the traffic generated by a proposed development by applying the Institute of Transportation Engineers' *Trip Generation* manual, distributing estimated trips to affected roadways and comparing the resulting traffic volumes to the design volume of the affected roadways. The result is a *volume-to-capacity* ratio (*v/c* ratio), which can be translated into an LOS standard.

Table 1. Sample LOS Standards Based on Volume-to-Capacity Ratios

LOS	Highway Capacity Manual ¹	FDCA ²
A	0.33	0.30
B	0.50	0.50
C	0.65	0.75
D	0.80	0.90
E	1.00	1.00
F	Highly Variable	>1.00

¹ *Highway Capacity Manual* standard for multilane highways with design speed of 60 mph.

² Florida Department of Community Affairs, *Model Transportation Element*, 9.

that capacity to new development. The process of planning for concurrency is summarized in Figure 1.

The adopted LOS standard is a policy decision regarding the appropriate equilibrium between private development and public infrastructure. The time required to plan and to construct major public facilities generally exceeds the time required to build private projects, and the construction of additional facilities or capacity is normally intended to serve both existing and future needs (i.e., investment in major public facilities tends to be "lumpy") (Montgomery County Planning Board, Oct. 1977, 1-9). As private development pressures and existing public infrastructure reach equilibrium, a method must be in place to allocate excess capacity and to define existing deficiencies for development permitting purposes. LOS standards are used to define this equilibrium by determining what proportion of population to specified public facilities or infrastructure capacity constitutes the appropriate LOS for an area. Based on this policy decision, the carrying capacity of existing, planned, and budgeted facilities may be determined for purposes of allocating excess capacity on a temporal basis, and applications for subdivision approval or rezoning may be denied where LOS is exceeded.

It is essential that the APFO contain standards that have some relationship or relevance to new growth and development. The LOS standard should not simply recite the demand created by a new development or the capacity of a particular facility. Instead, the standard should relate the demand for the public facility to the capacity of the facility through a ratio, since the ratio will change with new growth and development. For example, an LOS standard defined simply as the volume of traffic that a particular road segment can handle (i.e., the capacity of the segment) is not really a "level of service" standard since that capacity will not change with new growth and development. Similarly, simply referring to the LOS as the volume of traffic generated by a project is

not a useful standard for concurrency review purposes. To do so does not result in a comparison of that demand to the capacity of new and existing facilities to support it. Instead, a *volume-to-capacity* (*v/c*) ratio is preferable, since the reviewing agency can determine how the ratio changes as new growth occurs and as new facilities are added. (See Table 1.)

For concurrency purposes, the following factors should be considered when choosing an LOS:

- The relationship of the standard to health, safety, and welfare
- Whether the standard is attainable given: available funding sources; the feasibility of construction and right-of-way acquisition; factors beyond the control of the local government (e.g., externally generated traffic); and the period of time over which the standard is to be achieved
- Consistency with state standards or standards adopted by other service providers¹
- Consumer behavior, including peaking characteristics, whether use is increasing or decreasing, and substitution principles (e.g., substitution of mass transit for automobile use; recycling; or water conservation)

Few jurisdictions have developed useful standards for multimodal systems that include public transit. In Florida, most standards embodied in the comprehensive plan relate solely to performance characteristics of the system and are probably not intended to be enforced through the development approval process (e.g., "nine passenger miles per capita," "0.75 percent of all county transportation trips"). For example, in Palm Beach County, Florida, the APFO provides that new development permits shall not cause the county's total mass transit capacity to fall below "that which can accommodate three quarters of one percent (0.75%) of the total County transportation trips." In Dade County,

Florida, the LOS standard is based on a policy that public transit services have 60-minute headways and an average route spacing of one mile in areas with resident and employment populations of 10,000 persons per square mile. The LOS standard is calculated on the basis of "traffic analysis districts." Transit service is not required if densities within the traffic analysis district fall below this standard. If the standard is met, the developer must estimate the additional vehicle miles, vehicle hours, and vehicles needed to operate additional transit service. If the service is considered economically feasible, based on transit district ridership forecasts, the ridership projections are applied to the population and employment figures to determine whether increased transit is needed. These standards are difficult to link to proposals for new development.

There are several policy and operational issues associated with applying a transit LOS. First, transit facilities are often underutilized and require high densities in surrounding areas to achieve feasible ridership levels. Second, limitations on growth and density in transit corridors may encourage growth to occur first in areas with existing excess roadway capacity. This may have the effect of undermining the overall people-carrying capacity of the transportation system by encouraging the use of transportation facilities (such as roadways) that have lower volume capacities than most public transit facilities.² Some jurisdictions have developed innovative approaches to multimodal systems by either aggregating LOS standards on an area or corridor basis by adjusting LOS to reflect the availability of transit or by combining

roadway and transit or high-occupant-vehicle (HOV) facilities to develop a carrying capacity for the overall system (KJS Associates 1995).

Minimum Requirements Assigned by Stage in Development Review Process

Once the applicable LOS for purposes of issuing development permits and initiating capital investment and budgeting strategies has been identified, the decision maker must resolve the issue of when the LOS must be attained in order for development to proceed. In other words, how much "lag time" will the agency tolerate between the construction and occupancy of the development and the availability of the facilities needed to serve the development? The question of when facilities must be available and how they will be guaranteed is referred to by the Florida Department of Community Affairs regulations as the "minimum requirements" for concurrency. Figure 2 illustrates how the consideration of programmed facility capacity may vary according to a project's stage in the approval process.

It should also be kept in mind that the minimum requirements issue is distinguishable from the LOS that must be attained when those facilities are available. While the adopted LOS could affect an agency's policy decision regarding the minimum requirements imposed for availability—and vice versa—the standards are distinguishable. The former refers to the *capacity* and/or *quality* of the facilities while the latter refers to *when* the facilities must be available, the *stage in the planning process* that the facilities must have proceeded to in

Figure 2. Measuring Development Progress Against Facility Availability

Figure 2. Measuring Development Progress Against Facility Availability				
Gestation Period for Public Facilities:				
T I M E	Planning	Included in CIP	Included in CIP	Construction Complete
			Right-of-Way Acquisition	
			Construction Contract Let	
Gestation Period for Private Development:				
T I M E				Building Permit/ Certificate of Occupancy
		Preliminary Plat Application for Conditional Use Approval	Final Plat	
	Rezoning/ Plan Amendment		Final Development Plan	

order to be considered available for purposes of calculating the LOS, and how the facilities will be *guaranteed or provided* at the time of concurrency evaluation or permit issuance.

Minimum requirements depend primarily on two factors: (1) the stage in the development process at which the project is reviewed and (2) the type of facility involved. The first variable relates directly to the "lag time" issue. Early in the development process, for example, it is not essential for purposes of concurrency that public facilities be in existence. The need for public facilities to be in place is greatest when the impacts of the development are imminent—such as at the building permit stage. Planned improvements, however, may be counted when the evaluation occurs early in the development process.

Minimum requirements may also vary depending on the type of facility involved. The rationale is that (1) some facilities are more directly related to public health, safety, and welfare than others, and (2) some facilities may require a longer or more unpredictable acquisition and planning process than others. For example, the Florida regulations have historically permitted a three-year lag time for transportation facilities, while the Washington legislation provides that transportation facilities must be in place within six years of permit issuance.

IMPACT ANALYSIS

The standard of review for concurrency involves a determination of whether there is *available facility capacity* to serve a proposed development by comparing *total facility capacity* in the impact area to *current demand* and *projected demand* for those facilities. Standard engineering and planning procedures exist for estimating the impacts of a land development project. Evaluation of those impacts within the context of a concurrency management system, however, raises important administrative questions. For example, while it is obvious that the impacts of existing residents and employees and the project subject to review must be considered, the impacts created by approved but unbuilt projects should also be considered. Failing to measure the impacts of approved but unbuilt projects may result in an overestimation of the capacity available to serve new development. However, counting the impacts created by approved but unbuilt projects may *underestimate* the actual net capacity of a facility (total capacity less amount allocated to existing and approved development). Some proportion of those projects can be expected not to proceed to construction.

The procedures for measuring available capacity differ primarily in their treatment of background growth (i.e., the demand created by approved but unbuilt development as well as demand created by other sources, such as traffic generated outside of the jurisdiction and from natural increase). In general terms, the determination of concurrency may take one of the two basic forms, described in the following sections.

Alternative 1: Project-Specific Tracking. This alternative requires the reviewing agency to

account for all development that is approved under the ordinance as permits are approved. The demand for public facilities that will be created by each approved development will be "debited" against available capacity. Under this system, some permits can be excluded where they occur early in the approval process and where facility capacity has not been reserved. For example, approved preliminary plats may be excluded from the tracking system, since only a small proportion will ever proceed to final approval and construction. On the other hand, a designated percentage of all permits can be counted based upon the proportion of such permits that have historically proceeded to construction and occupancy (e.g., 50 percent of preliminary plats, 75 percent of final plats, and 95 percent of building permits). (See Figure 3 for formula.)

Alternative 2: Generalized Determination of Background Growth. Under this system, the permitting agency would account for approved but unbuilt development by estimating the amount of new demand that has been created for public facilities from the jurisdiction's historic and projected growth rates, rather than through a permit-by-permit tracking system. This system is easier to administer but is less accurate, and could create problems where development activity is much higher than normal. (See Figure 4 for the formula.)

The difference between Alternatives 1 and 2 discussed above lies in the procedure for tracking that portion of background growth attributable to new development and permitting activity. In order to obtain a true picture of the demand on public facilities and services that will exist when the impacts of a development occur, the agency should develop a mechanism for counting background growth. The alternatives for estimating background growth include:

- 1) tabulating projects that have proceeded to a certain stage of the approval process and entering the demand created by those developments into the tabulation as those permits are granted (which will require a policy decision by the agency as to which development permits to track, based upon the likelihood of project completion and administrative capabilities);
- 2) developing an adjusted growth rate on a periodic basis, based upon the rate of permit issuance over a given time period; or
- 3) tracking the demand for public facilities created externally, including the demand for public facilities created by natural increase.

In addition, the procedure for measuring capacity can take several forms. First, the agency could measure the LOS for each public facility as each new development is reviewed. This is the most common approach.

Second, the agency could predetermine the "carrying capacity" of the area within its jurisdiction or of

Figure 3. Accounting for Capacity for All Approved Development Using Permit Tracking	
Formula: $AC = (C_e + C_n) - (D_e + D_p + D_r + D_{100})$	
W H E R E	AC = capacity available to serve new development
	C_e = capacity provided by existing facilities at the adopted LOS
	C_n = capacity of new or planned facilities, as determined by the minimum requirements
	D_e = demand created by existing and vested development
	D_p = demand created by the project under consideration
	D_r = demand created by developments with capacity reservations
	D_{100} = demand created by other developments with approved permits

particular areas within its jurisdiction, based on the LOS standards adopted for each public facility. An areawide growth limit could then be imposed that limits population and employment to that amount that can be supported by existing and planned public facilities. Several counties in Florida have combined the case-by-case approach with the second approach by creating "deferral areas." A "deferral area" is a specifically designated area where facilities are deficient. New development within those areas is either deferred until the facilities needed to rectify the deficiencies are available, or it is subject to special review procedures and minimum requirements.

Third, the agency could adopt a "point system" that enables the reviewing agency to balance concurrency review with other public policies and that could include a "weighting system" on the capacity and availability of public facilities for purposes of concurrency review. For example, the agency could assign point scores for the availability of a specified amount of capacity for each public facility and for the achievement of other public

policies, such as the provision of affordable housing. Thus, a project that would create a deficiency in one public facility, such as transportation, could receive approval if a compensating point score is achieved for other public facilities or for the provision of other public benefits.

Finally, the projected impact of a development project could be reduced by incorporating mitigation measures. The most common example is Transportation Demand Management (TDM) measures, which may be used to reduce the traffic-generating impacts of a development through ridesharing, transit subsidies, and staggered work hours. If this approach is taken, it is critical that mitigation, monitoring, and enforcement mechanisms be established to ensure that the measures are actually implemented following project approval.

Compliance with the applicable LOS is determined by comparing the projected impacts of a project with the capacity of those facilities affected by the project. Thus, the agency must address two issues.

Figure 4. Estimating New Demand for Facilities Based on Historic and Projected Growth Rates	
Formula: $AC = (C_e + C_n) - (D_e + D_p + D_g)$	
W H E R E	AC = capacity available to serve new development
	C_e = capacity provided by existing facilities at the adopted LOS
	C_n = capacity of new or planned facilities, as determined by the minimum requirements
	D_e = demand created by existing and vested development
	D_p = demand created by the project under consideration
	D_g = demand created by the developments with capacity reservations and approved development orders based upon generalized background growth rate

1) *The geographic area affected by the project, known as the "impact area" or "evaluation area."* All facilities within that area must be available at the designated LOS.

Jerry Weitz, an Urban Growth Management Specialist with the Transportation and Growth Management Program of the Oregon Department of Land Conservation and Development, identifies the following four approaches to impact area measurement: parcel level, district/zone level, plan level, and regional level (Weitz 1996). A parcel-level analysis measures abutting or nearby streets, and involves a fairly simple computational approach for transportation engineers. However, this method tends to understate the true areas of impact created by larger developments. The district- or zone-level approach, employed by Montgomery County, Maryland, uses an areawide LOS or a summation of volumes and capacities ("summing") within a designated policy area (Savage 1993). Some jurisdictions also use "screenlines" across parallel corridor routes coupled with a sophisticated modelling analysis within the zones. The plan approach loads the traffic resulting from the buildout of the plan horizon onto the existing and proposed roadway system, using summing, LOS averages weighted by lane miles or VMT, or performance summaries that specify lane miles or VMT which exceed the LOS. While the regional-level approach is often used for analytical purposes by Metropolitan Planning Organizations, it is rarely employed in an enforceable concurrency management system. The State of Washington requires local LOS to conform to the regional transportation plan prepared by the MPO.

2) *Whether facilities will be excluded because of the jurisdictional responsibility for their provision (e.g., state or federal highways).*

In some states, like Florida, federal or state facilities are sometimes excluded on the grounds that the local government lacks authority to provide or to expand the facilities. The failure of another entity to expand the facility when needed to secure development approval could result in a *de facto* moratorium, thus creating possible legal challenges and interfering with the agency's timing and sequencing goals. Intergovernmental agreements can alleviate this problem. The agency should also consider whether facilities provided by other governmental entities are to be included in the measurement of capacity.

In addition, the agency may wish to vary the LOS standards applicable to each public facility by geographic area, over time, or by type of project. LOS standards may vary by geographic area in order to allow flexibility in the achievement of other public objectives, such as promoting infill development. LOS standards may also vary by geographic area where substantial deficiencies exist or where environmental or other constraints prevent facility expansion (these are sometimes referred to as "backlogged" or "constrained" facilities). For example, the Florida regulations provide that LOS standards may be "tiered" over time in order to avoid the harsh effect of an immediate, high LOS on the growth and development in a jurisdiction. To

achieve this result, one standard can be set for purposes of review for some specified period of time subsequent to adoption of the APFO, with a higher standard taking effect at a specified future date.

The use of standard procedures for traffic impact analysis has become fairly common in jurisdictions with APFOs. These procedures are a prime example of the application of impact areas and impact evaluation principles discussed in the previous sections. Because roadways are a networked, open-ended facility, it is essential to establish clear criteria for the establishment of impact areas. Traffic impact analyses are generally required of the applicant for development approval as a part of the application process. Flexible provisions should be included in order to account for factors beyond the control of the developer and the agency, such as regional pass-through traffic. Special provisions may be included for the implementation of measures that mitigate traffic generation, such as mixed uses and TDM. If the agency does not wish to undertake a full-blown review for all projects, a compliance threshold should be established. For roads, the ordinance should indicate whether intersections, or links, or both, should be evaluated.

ALLOCATING CAPACITY

Once available transportation capacity has been determined, a procedure might be devised for allocating such capacity to competing development proposals. Most concurrency management ordinances fail to address this issue. In general, capacity is allocated on a first-come, first-served basis as development applications are processed. However, where the threshold of available capacity is constricted by new development, the agency might wish to consider allocating capacity only to projects that achieve important goals and objectives of the comprehensive plan or that should be granted preferential treatment for hardship or other reasons (Chinn and Garvin 1992).

The first alternative for allocating capacity would be the use of a *set aside*. Under this system, a percentage of available capacity is reserved for certain types or categories of development. For example, in Montgomery County, Maryland, projects defined as affordable housing may be approved where the available capacity threshold in the applicable impact area has been exceeded, provided, however, that such projects must be reviewed for their impacts on localized facilities (nearby intersections and roadway links). A similar policy is authorized by New Jersey's Council on Affordable Housing, which administers that state's housing policies for local governments. In addition, Montgomery County's program allocates capacity to residential and nonresidential projects within each impact area in such a manner as to maintain a favorable ratio between jobs and housing. This is accomplished by computing a separate development threshold within each area for employment and housing.

A second alternative would be a *point system* that enables the reviewing agency to balance concurrency review with other public policies and that could include a "weighting system" for determining the capacity and availability of public facilities for purposes of

concurrency review. For example, the agency could assign point scores for the availability of a specified amount of capacity for each public facility and/or for the achievement of other public policies, such as the provision of affordable housing. Thus, a project that would create a deficiency in one public facility, such as transportation, could receive approval if a compensating point score is achieved for other public facilities and/or for the provision of other public benefits. Care must be taken that the minimum requirements set forth in the regulations are not violated and that the evaluation criteria are specifically delineated.

A point system or set-aside can be tailored in a nearly infinite number of ways. Development orders can be "batched" during an annual allocation process and ranked under the point system, with development orders issued only to those projects earning the highest scores. The two alternatives could also be combined. A certain proportion of available capacity could be set aside for those projects earning the highest ranking under a point system. The alternative methodologies for ranking and allocating projects are limited only by the agency's imagination.

CONCURRENCY REVIEW PROCEDURES

Provisions should be included in the ordinance to inform applicants for development approval and the reviewing agencies of the procedures and scope of the concurrency provisions. These provisions are discussed in the following paragraphs.

Defining When to Test and Enforce Concurrency

The ordinance must make clear the stage in the development review process at which concurrency is *tested* and the stage in the development review process at which concurrency is *enforced*.

The stage at which adequacy is tested refers to any stage in the development process at which the current and projected capacity of public facilities is compared to the current and projected demand for public facilities. This evaluation may occur more than once during the entire development review process. The evaluation need not show that facilities are currently adequate to serve the development so long as facilities will be adequate when the impacts of the development occur.

The stage in the development process at which concurrency is enforced refers to the stage at which the adequacy evaluation must indicate that facilities are adequate to serve the development in order for the permit to be approved or issued. For example, a nonbinding adequacy review may occur at the preliminary plat stage, subject to the condition that facilities will be adequate at the final plat and building permit stage. Under that type of review process, a preliminary plat could be issued even if the adequacy evaluation indicates that facilities are not currently adequate to accommodate the impacts of the development. However, the applicant would not receive final plat approval or building permit issuance until a later evaluation indicates that facilities are adequate to accommodate the development.

Concurrency evaluation and enforcement may occur at the same stage in the development approval process.

(See the discussion of "Minimum Requirements Assigned by Stage in Development Review Process," above.) For example, the evaluation and enforcement of concurrency could be deferred to the building permit stage. This approach provides the advantage of administrative convenience, yet may offer little certainty in the development approval process. Conversely, concurrency could be tested and enforced at the preliminary plat stage. This approach provides certainty to subdividers who pass the concurrency test. However, it could result in the consumption of significant amounts of capacity by speculative plats that may never proceed to final approval.

As an alternative, the agency may test for concurrency at a relatively early stage in the development approval process, while enforcing the concurrency standards at the final approval stage. For example, the adequacy evaluation could be made at the preliminary plat stage. The agency would then require the developer to demonstrate that facilities are "adequate," as demonstrated at the preliminary plat stage, in order for the developer to receive a final plat and/or building permit. Testing for the adequacy of public facilities may occur prior to the final development approval stage in order to provide greater certainty for developers and to deny approval or impose conditions before substantial investments have been made. The agency should specify whether approval is binding and set a time limit by which subsequent approvals must be secured or by which construction must proceed in order to prevent the hoarding of capacity. Figure 5 illustrates the advantages and disadvantages of enforcing concurrency at an early stage in the development process.

Designating Responsibility for Review

The local government should clearly designate which agency is responsible for conducting the concurrency review and the procedure for seeking approval. Generally, the planning staff assumes responsibility for concurrency review and permit issuance. However, the agency may also wish to include those departments with primary responsibility for the mandated facilities. The specific administrative and technical methodology for conducting concurrency review should be set forth in the ordinance and/or in a procedural manual. Some jurisdictions use a procedural manual to explain the technical aspects of concurrency review, including both technical and procedural requirements, in layman's terms.

Exemptions and Waivers

Exemptions may be considered for purposes of administrative efficiency where projects have minimal effect on public facilities. However, care must be taken to ensure that exemptions do not result in a degradation of LOS for public facilities. At the same time, it should be kept in mind that building permits are often required for construction activities that do not affect public facilities, such as signs and accessory structures. In addition, exemptions may also be used to encourage development activities that promote other public benefits, although the criteria or categorization of such projects should be carefully delineated and supported by planning data.

Figure 5. Stage in the Development Process at which Test for Concurrency Is Enforced

Option	Advantages	Disadvantages	Comments
Preliminary Plat (early)	Amount of committed capacity clearly delineated, providing greater assurance for developers and a clearer basis upon which to project future demand for public facilities Enhances ability to put conditions on development proposals	Potential for hoarding of capacity Need to monitor committed capacity	Time limits may be imposed to prevent hoarding. Developers may be required to prepay impact fees or to provide other assurances in order to reserve capacity. There is a stronger equity argument for including planned improvements in adequacy evaluation.
Final Plat, Final Development Plan, or Building Permit	Closer relationship between facility construction and development impacts Administrative convenience; eliminates need to monitor committed capacity	Greater financial risk/less predictability for developers	Concurrency can be enforced at a late stage in the process while offering developers a nonbinding adequacy review early in the development process. Developers could then "reserve" capacity by providing the requisite assurances.
Enforcement at more than one stage	Facilitates monitoring of relationship between facility capacity and capacity committed to development	Greater administrative oversight needed	The effect of the evaluation—whether to provide a "preview" of available capacity at a later stage in the process or as a requirement for permit issuance—should be established clearly in the ordinance.

The agency might also consider the use of waivers for projects that have minimal impact on public facilities. Unlike an exemption, to which the landowner is entitled if its project meets the criteria set forth in the ordinance, a waiver requires administrative action. If waivers are used, the criteria for the waiver should be set forth with particularity, and the justification for the waiver should be supported by planning data.

If either waivers or exemptions are used, the agency should carefully monitor those projects using an exemption or waiver in order to assess their cumulative impact on public facilities.

ENFORCEMENT

It is essential that the ordinance clearly set forth what happens when facilities are not adequate at the time of evaluation. If capacity is found inadequate, the agency has the following options:

- Deny approval
- Condition approval on the adequacy of public facilities at the time at which final approval is received
- Impose phasing conditions so that development is timed and sequenced to occur with the availability of planned facilities.

When facilities are found adequate before a final development order is issued, it must be determined whether this finding "reserves" that capacity for the development or whether a new finding must be secured at a later stage in the development approval process. If planned facilities are included in the earlier finding, the ordinance must specify whether the reservation remains valid in the event that the facilities do not proceed to construction. In addition, reservations of capacity must be integrated with the development monitoring procedures in order to prevent the overallocation of capacity. Procedures also should be developed to prevent the "hoarding" of capacity by approved but unbuilt projects.

Some concurrency ordinances allow developers to construct the necessary facilities and services needed to reach the adopted LOS where the development would otherwise be delayed or denied. If such a provision results in the construction of facilities beyond those required by the development, it must be determined whether the developer will receive reimbursement for the excess capacity provided and whether the excess capacity may be allocated to other projects. Thus, where facilities are currently operating below the adopted LOS, the local government has five options:

1. For deficient roadways, the agency may allow development to proceed if it will not cause the

existing LOS to be degraded. This requirement would be satisfied by the construction of facilities or payment of an in-lieu fee by a developer sufficient to accommodate the full impacts of the development.

2. The agency could require the denial of development approval or the deferral of development approval until the facilities are operating at the adopted LOS. Thus, development would be delayed until the necessary improvements are scheduled in the CIP. In addition, no mechanism would be created to allow a developer to correct the roadway deficiency so that the development could proceed at an earlier date than anticipated in the CIP. This approach could delay development for indefinite periods of time, thereby subjecting the agency to takings liability.
3. The agency could deny or defer development, as discussed above, but add a provision allowing the developer to construct the facilities necessary to meet the adopted LOS standard. This is known as the "mitigation" or "abatement" of existing deficiencies. If the developer provides facilities in addition to those made necessary by the impacts created by the development proposed, is the developer entitled to reimbursement? The courts have not resolved this issue. The theory for not providing reimbursement is that the developer has voluntarily corrected the deficiencies, since the developer could have deferred construction pending public construction of the facilities as scheduled in the CIP.
4. The agency could adopt a denial or deferral procedure with a provision for mitigation or abatement, as discussed above. However, reimbursement would be provided according to a procedure adopted in the ordinance.
5. Finally, a monitoring system should be devised in order to determine the amount of capacity for each facility, the amount of capacity absorbed by existing development, and the amount of capacity that will be absorbed by approved but unbuilt projects. The critical decisions in establishing a development monitoring system include:
 - *Deciding which permits to monitor.* Monitoring only building permits could underestimate potential demand on the jurisdiction's public facilities and services, since development permits occurring earlier in the approval process—such as subdivision plats and conditional use permits—will have already been issued. Conversely, monitoring all subdivision plats, conditional use permits, and building permits issued will overstate demand, since only a fraction of those permits issued early in the approval process will proceed to construction. A better approach is to count all permits approved late in the approval process (e.g., building permits and certificates of occupancy), and only that fraction of permits occurring earlier in the process that historically proceed to construction. This will provide a fairly

accurate estimate of potential demand for public facilities and services although the vagaries of the real estate market prohibit pinpoint accuracy.

- *Deciding how often to produce monitoring reports.* Monitoring reports are generally employed to estimate available capacity for each facility and to provide a basis for the budgeting, scheduling, and prioritizing of capital facilities. Some jurisdictions (e.g., Monroe County, Florida, and Montgomery County, Maryland) provide monitoring reports on an annual basis. If staffing is sufficient, monitoring reports could be performed on a more frequent basis. As an alternative, monitoring could occur when the CIP is updated.
- *Deciding which agency will be responsible for monitoring.* Responsible agencies may include the planning staff, departments with jurisdictional responsibility for public facilities, or both, under the supervision of a designated department head.

RESERVATION OF CAPACITY

When a determination of concurrency is made at one stage of the development approval process, intervening development approvals or adjustments in the background growth rate could absorb the remaining available capacity. Consequently, if the developer proceeds to a stage in the development approval process, capacity might not be available. For example, assume that developer A has submitted a preliminary plat for the construction of 10 single-family dwelling units (DUs). If the affected roadways can accommodate 200 average daily trips (ADTs), the developer would receive a certificate of concurrency since the development consumes only half of all available capacity (10 DUs X 10 trips per day = 100 ADTs). However, subsequent to the preliminary plat approval, assume that final plats are approved for two additional 10-dwelling unit subdivisions within the same impact area (this analysis assumes that the monitoring program does not count approved preliminary plats). These two developments would consume all the capacity available within the applicable impact area. Therefore, there would be no favorable concurrency determination at the final plat stage of approval unless the developer agrees to defer building permits or to provide the facilities necessary to avoid a degradation in the applicable LOS. If the agency determines that facilities are available at the adopted LOS standards at a particular stage of the development approval process, the determination should indicate whether capacity is reserved for subsequent stages of the approval process.

In order to address this issue, some jurisdictions have developed "capacity reservation" policies to ensure that a determination of concurrency remains valid through successive stages of the development approval process (i.e., the available facility capacity is set aside for that project). If capacity is "reserved," facility capacity is "debited" against the capacity remaining for subsequent development approvals, and the developer receives assurance that financial commitments made at one stage of the approval process will not be jeopardized by a finding that

adequate facilities do not exist at a subsequent stage of the approval process.

The capacity reservation policy may affect the viability and, consequently, the level of development within the jurisdiction. From the individual developer's perspective, the most favorable policy tests concurrency early in the process and automatically reserves capacity throughout the approval process. However, this practice may not be favorable to the development industry in the aggregate nor the agency's planning process. Under this procedure, developers who are first in line for initial approval could hoard capacity for speculative projects that may never proceed to construction. In addition, staff would be required to track committed capacity for initial development orders, such as preliminary plats, in order to ensure that it is not reallocated. This could create a waste of county resources with respect to the evaluation of projects that may never proceed to construction and occupancy.

The strictest policy requires a new evaluation of concurrency at each step of the approval process, without a capacity reservation policy. This would avoid some administrative costs associated with granting and tracking the reservation of capacity but may also be opposed by developers and landowners. For example, the agency could test concurrency at the preliminary plat, final plat, and building permit stages of approval, while monitoring only building permits issued. Therefore, a developer could meet the concurrency test at preliminary plat but not at the building permit stage due to intervening building permit approvals. This presents a risky scenario for developers but a somewhat less burdensome permit-tracking procedure for staff. The possibility of unanticipated delays late in the approval process increases the risk factor associated with development, which inhibits project financing and can be capitalized into higher home prices.

Some jurisdictions have adopted a policy that falls within one of these two extremes by reserving capacity only at an intermediate stage of the approval process (e.g., at the final plat stage or at final conditional use approval). However, if a developer has demonstrated a financial commitment to proceed to construction early in the approval process through the payment of impact fees or other commitments to capacity, the concurrency provisions should not present an obstacle at subsequent stages of the approval process. Conversely, developers who have proceeded to the final permitting stage, but who cannot proceed to construction, should have their capacity reallocated in order to allow subsequent applications to proceed.

Each alternative for testing concurrency and reserving capacity at various stages of the approval process has its advantages and disadvantages. (See Figure 6.)

Capacity may be reserved automatically or upon the payment of an appropriate fee. The jurisdiction may also use a combination of automatic reservation or fee policies. For example, the agency may want to reserve capacity automatically for a specified period of time and extend the capacity reservation for an additional period of time upon the payment of an appropriate fee. However, requiring the payment of an impact fee,

construction of facilities, or some other commitment prior to reserving capacity (rather than reserving capacity automatically) ensures that (1) only those developers committed to following through with construction will be allocated capacity, and (2) that funding will be available to provide the necessary facilities at that point in the development process at which the impacts of the development occur.

The ordinance may set forth a fixed time limit for reserved capacity, criteria by which abandonment may be determined, and provisions for reserving capacity in a development agreement. However, for developments in the approval pipeline, the period of time for which capacity is reserved could vary by its stage in the approval process. For example, the agency may wish to reserve capacity for the period of time needed to apply for the next permit in the approval process, with prepayment of impact fees needed to reserve capacity early in the process.

RELATED LEGAL AND POLICY ISSUES

Vested Rights

The effect of the concurrency requirements on property owners that have received some form of development approval, but who have not completed the approval process, is often the most hotly debated topic during the adoption of an APFO. For most land development regulations, there are many methods for dealing with vested rights, including leaving the entire issue to the courts, creating an administrative process for determining vested rights claims, grandfathering certain classes of development based upon how far they have proceeded through the process, or a combination of the above (Carlisle and White 1993). In addition, the agency may choose to "divest" grandfathered projects after a period of years if no construction has commenced, with the underlying theory being that the vested rights acquired, if not used for a long period of time, are deemed abandoned.

Many jurisdictions have adopted vested rights determination (VRD) procedures tailored specifically to concurrency regulations. The VRD procedure allows the decision maker to determine whether rights have vested and, if so, the scope of those rights. Some courts have ruled that vested rights as to the use, density, and configuration of development do not apply to different types of regulatory requirements, such as development timing or the payment of impact fees.³ If rights have vested, the procedure allows the local government to place a time limit on construction ("use it or lose it" requirements) in order to avoid the indefinite consumption of capacity by vested projects. In addition, some courts have upheld time limits on applications for vested rights or nonconforming use determinations.⁴ This allows the agency to track the demand for transportation capacity anticipated by vested developments.

The issue of divestment is politically controversial and raises some tough questions of constitutionality and statutory authority. While the legality of such a procedure has not been litigated in the concurrency context, some courts have allowed local governments to amortize nonconforming uses, which can be viewed as a form of "divestment" of vested rights. Amortization

Figure 6. Alternatives for Testing Concurrency and Reserving Capacity

Stage at which Concurrency Is Tested*	Stage at which Capacity Is Reserved	Method for Reserving Capacity	Advantages/Disadvantages
Early	Early	Automatic	Maximizes certainty in the approval process, at least for those projects entering the process while capacity is still available. However, capacity may be hoarded by speculative developments.
	Early	Reservation fee	Reduces possibility of speculative hoarding; however, more capacity is reserved for development that may never proceed to construction. The early payment of fees allows jurisdiction to provide those facilities needed for development to proceed.
	Late	Automatic	Developments that have proceeded to this stage of the approval process are probably not speculative. However, reservation fees may be needed to fund facilities needed for development to proceed. Conversely, the late payment of fees enhances the developer's financial position, which reduces development costs. Reserving capacity late in the approval process provides less certainty for developers, since unanticipated delays may be experienced after funds have been committed to secure early development approvals. However, late reservations minimize the amount of staff time and resources needed for permit tracking and also minimize the possibility of lengthy hoarding of capacity that might otherwise be allocated to other developments. Requiring a reservation fee provides funding needed for development to proceed, although not in as timely a fashion as early payment of reservation fees.
	Late	Reservation fee	
Intermediate**	Intermediate or late	Automatic	Testing concurrency and reserving capacity late in the approval process provides the least amount of certainty for developers. This can be minimized somewhat by reserving capacity even without requiring the payment of reservation fees. However, money may still be needed to provide necessary facilities in a timely manner.
		Reservation fee	

Notes:

* Stages in the approval process include:

Early stages in the approval process = rezoning, preliminary plat, or application for conditional use approval

Intermediate stages of approval process = final plat, final development plan approval (conditional use permit), certificate of compliance

Late stages of approval process = building permit or certificate of occupancy

** Permits must be tested at early stages also if a specific plan of development is presented

does not deprive a landowner of all use of the property, but requires the property owner to demolish existing uses after a reasonable period of time and to replace them with a legally conforming use. By comparison, the application of an APFO to a property owner with vested rights does not deprive the owner of the right to build but requires the owner to submit to concurrency review. Unlike amortization, the requirement to submit to concurrency review over a period of time does not mandate the destruction of a building or other land use.

Therefore, application of a concurrency requirement should have a minimal effect on a landowner's investment-backed expectations.

Urban Sprawl and Transportation Concurrency Management Areas

It is commonly believed that, where LOS standards are deficient or stringent, concurrency policies force development pressures outside of the enforcing jurisdiction because developers will seek approval in

areas in which traffic capacity is adequate. Accordingly, critics argue that transportation concurrency has the effect of increasing trip lengths and exacerbating the congestion problem that the concurrency standard was intended to resolve. Further, critics argue that concurrency has the effect of inducing urban sprawl and hindering the development or redevelopment of urban areas. Often, this argument is generally directed toward moratoria rather than APFOs (Cervero 1986; "Traffic-Linked Growth Control" 1989).

The author is aware of no empirical research that bears out these concerns. Furthermore, it is not clear that concurrency policies alone will completely alter the site location decisions of many developers. The presence of traffic is an indicator of the relative attractiveness of the jurisdiction for real estate development. Numerous site location decisions are based on the presence of increased traffic demands, rendering a site more marketable. For a developer to simply relocate as a result of concurrency policies would often mean that the developer has opted to trade the marketability of a tract of land for the right to build sooner. On the other hand, given the length of time it takes to secure financing and other governmental approvals, a developer might use the delay to his or her advantage. Timing and sequencing mechanisms are no more restrictive than the traditional land-use controls normally used to respond to traffic congestion. In fact, timing and sequencing mechanisms can—and often are—coupled with less restrictive underlying zoning schemes, as evidenced by numerous development agreements calling for the phasing of development over time. Moreover, outlying jurisdictions may not have the public facilities and services or complementary businesses needed to render the project buildable or marketable.

To the extent that these concerns are valid, they can be remedied by varying the LOS standards applied by the jurisdiction. First, lower LOS standards may be applied to areas close to the urban core, where traffic congestion is heaviest during the peak hour. This approach is realistic, consistent with other comprehensive planning goals in most jurisdictions, and reflective of consumer expectations. After all, concurrency is not designed to *eliminate* congestion but to *regulate* it. Second, separate growth ceilings may be calculated for employment and housing in order to minimize the effect of decentralized development on trip lengths and to try to maintain a balance between jobs and housing. Both of these approaches are used by Montgomery County, Maryland. (See Chapter 4.)

Transportation Concurrency Management Areas (TCMAs) are a framework for using concurrency management in a manner conducive to mass transit, economic development, and a desirable urban form. A TCMA is a discrete, functional area in which regulatory incentives and increased capital investment are applied through the concurrency management system. A TCMA may be used for the following purposes:

- Limiting sprawl development and concentrating important economic development opportunities
- Revitalizing built-up areas

- Protecting natural resources
- Providing a mix of residential and nonresidential uses

The TCMA approach has been adopted by the Florida legislature. (See Chapter 4.)

Mechanisms for structuring a TCMA include capacity allocations, exemptions, and regulatory incentives. For example, capacity could be allocated to designated nodes and centers. Identification of service levels and regional transportation improvements may be used to establish a *transportation carrying capacity*, which is then allocated to centers or TCMAs.

The carrying capacity would establish a ceiling on development. This would provide a basis for the allocation of capacity to centers/TCMAs and, because the capacity measure is regional, would also require that capacity used in centers be debited from the outlying areas. This would ensure that (1) capacity for regional centers is accorded a priority for use by developers, and (2) capacity is taken away from areas where development is assigned a low priority by the public sector, thereby ensuring that the goals and objectives of development in the regional centers are not thwarted by competition from outlying areas. Capacity in TCMAs could be allocated on a first-come, first-served basis or be subject to certain allocation criteria. The growth limit could apply *only* to outlying areas. In essence, capacity is allocated to TCMAs or growth centers solely by the free market—a concept acceptable to the business community. However, the total growth limit is (theoretically) not exceeded, since it is assumed that most of the trips generated in TCMAs will be transit oriented.

As an alternative, TCMAs or growth centers could be exempt from the system. The capacity not "used" by the exemption areas is reallocated to other centers. This places a ceiling on growth in the other TCMAs or growth centers; however, the ceiling would be higher than in the first example.

The TCMA approach relies on a flexible interpretation of concurrency requirements. The system may employ a *two-tiered* LOS standard. Instead of mandating compliance with a uniform LOS for every node, intersection, and link of the transportation system, the tiered system focuses on the transportation system as an entire network. An *areawide* LOS may be established, which provides a basis for the allocation of capacity, coupled with a *localized* evaluation or incentive system for particular areas. Rural service levels can be employed in outlying areas to prevent sprawl.

Other zoning and land-use controls may be used to complement the urban form promoted by the TCMA. Development in TCMAs may use innovative and flexible land-use techniques, such as bonus/incentive zoning, cluster development, planned unit development, transfers of development rights, and others. Densities in the range of 9-12 residential dwelling units per acre in designated growth centers can provide opportunities for the use of transit

facilities without jeopardizing the character of established neighborhoods. Neotraditional development and pedestrian pockets involve the use of attractive, single-family neighborhoods arranged in a traditional, grid street pattern clustered in proximity to transit facilities. These developments provide opportunities for pedestrian access to retail, office, and commercial facilities while blending into existing single-family neighborhood areas. Duplexes and townhouses can be located in proximity to transit facilities to provide housing opportunities to potential transit users. Streamlined permit processing and master environmental impact statements may be used to expedite approval for qualifying developments. Development agreements may be used to "reserve" an allocation of transportation/transit system capacity. A significant body of literature is now available to demonstrate how village and neotraditional design principles may be incorporated into zoning standards and project design (Calthorpe 1993; Duany and Plater-Zyberk 1991; Katz 1994; Kelbaugh 1989; Mohney and Easterling 1991; Sutro 1991; Unwin 1909).

CIP priority should be given to facilities in TCMAs. State bonding subsidies, such as general obligation bond backing for transit bonds, could be used to reduce interest rates and the tax burdens associated with financing transportation systems. TCMAs could be given preferential allocation of federal monies under the Intermodal Surface Transportation Enabling Act (ISTEA).

TCMAs should be geographically compact in order to focus development and to preserve the integrity and the carrying capacity of the transportation/transit system. Obviously, overuse has the potential of swallowing the concurrency system and minimizing the incentive for developers to build in the urban core.

Deficiencies

In many jurisdictions, concurrency is not applied until the transportation network is over capacity; that is, it is applied in response to overcrowded roads and intersections. However, significant reductions in congestion cannot be achieved overnight. The APFO should be based on a *realistic LOS that is attainable over a specified period of time*. Implementing an APFO involves a comprehensive planning process that recognizes that LOS deficiencies cannot be resolved by simply stopping growth or adding capacity. The two must be brought into sync over time.

Because the presence and degree of deficiencies are functions of how LOS is defined, some jurisdictions have taken a flexible approach to LOS that establishes long-term goals that account for the complexity of resolving congestion. In Florida, the original state concurrency regulations authorized a two-tiered LOS whereby a lower LOS would apply for purposes of development permitting, with the desired LOS becoming effective at date certain identified in the comprehensive plan. Florida has now adopted a procedure for a "long-term transportation concurrency management system," which is described in greater detail in Chapter 4.

Housing

Critics of concurrency often argue that the timing and sequencing mechanisms will drive up the cost of housing. In fact, however, most local governments already use traffic congestion concerns to deny or to delay proposed developments on an ad-hoc basis. By contrast, concurrency creates an entire planning process for providing the facilities needed to serve new housing and provides a numerical basis for evaluating development proposals. Accordingly, while the policy could have strict consequences, many developers report that the rules of the game are more definite and certain under a concurrency management system than under traditional zoning.

Some jurisdictions, such as Montgomery County, Maryland, (see Chapter 4) use housing as a key ingredient in the congestion equation. One of the primary reasons for urban decentralization has been the presence of affordable housing on the urban fringe due to the abundance of vacant, low-cost land. In Southern California, this situation has forced many commuters to travel for up to two hours for home-to-work trips (Fulton 1990). The lack of affordable housing is a major reason for the jobs-housing imbalance in many urban areas. Housing affordability can be promoted through adequate public facilities policies by creating exemptions or preferential treatment for qualified affordable housing projects ("Development Fees" 1990). A recent study of California cities indicates that there is no relationship between housing prices in communities with growth management programs and those without growth management programs (Glickfield and Levitt 1992, 53-56).

Because the concurrency management system may limit the timing and amount of housing construction, it may adversely affect affordable housing objectives by limiting the supply of housing (thus effectuating a general increase in housing prices) and by directly deferring the construction of housing for low- or very low-income persons. Several jurisdictions have adopted specific measures to address this issue. The Florida Department of Community Affairs has indicated that the following alternatives may be pursued in order to soften any impact of the concurrency management system on the construction of affordable housing, so long as the minimum requirements in the state regulations are satisfied:

- Reservation of capacity for affordable housing projects
- Targeting infrastructure for areas with sites designated for affordable housing
- Adoption of different concurrency standards for affordable housing
- Refund of fees that exceed the reasonable cost of administering the APFO (Florida Department of Community Affairs 1990)

Montgomery County, Maryland, and the State of New Jersey have also implemented capacity allocation or set-aside policies to address housing issues (see discussion under "Allocating Capacity," above).

Adequate Public Facility Criteria: Linking Growth to School Capacity

By Richard Ducker

A number of school systems in North Carolina today are struggling to provide school facilities adequate to a system of quality education.¹ In some jurisdictions, local financial resources may be too meager to provide a system of high-quality public schools. In other areas, where financial resources are adequate, the electorate may be unwilling to support the construction of new school facilities or the expansion or renovation of existing ones. In still other school districts, rapid population growth and a rise in the number of school-age children are creating pressures on local governments to provide schools in time to accommodate this growth. In such a situation, political support for public schools may fade if voters come to associate overcrowded schools with an influx of newcomers into the community.

It seems elementary that population growth should lead to a larger tax base, increased tax revenues, and more opportunities for local governments to provide and pay for new public facilities. In areas of rapid growth, however, public revenues do not necessarily become available at a suitable pace or in the right form to cover growing public costs. Local governments

and school districts find it difficult to plan for and commit public funds to capital projects before the need for them becomes obvious.

In most debates about school facilities, population growth—while not capable of exact prediction—is viewed as a given, a reason to expand school capacity. However, a few North Carolina communities are trying to accomplish the converse, hoping to link growth to school capacity. They are applying *adequate public facilities* (APF) criteria to their local government planning programs and land development ordinances.

The Concept

The key feature, and perhaps prime virtue, of an APF program is that it is designed to prevent a community's growth from outpacing the local government's ability to provide necessary public facilities to serve that growth. It also can be used to channel growth into geographic areas (and school attendance zones) that are more capable of handling new development. The primary APF criterion requires developers seeking project approval to show that currently available public facilities have adequate capacity to accommodate the project—or will have such capacity when the project is ready for occupancy. Thus certain restrictions on development, pending completion of new or expanded school facilities, may be permissible in the short run even though they would not be in the long run.² Because it requires that facilities be provided concurrently with development, the APF criterion is sometimes known as the *concurrency criterion*.³

To see how APF standards may be linked to public school facilities, we first need to understand the functioning of conventional planning and land development control systems

Richard Ducker is a School of Government faculty member who specializes in land use and zoning, transportation, and code enforcement.

1. The obligation of North Carolina state government to support public schools is being shaped by the decision of the North Carolina Supreme Court in *Leandro v. State*, 346 N.C. 336, 347, 488 S.E.2d 249, 255 (1997), which unanimously concluded that the North Carolina Constitution "guarantees [to] every child of this state an opportunity to receive a sound basic education in our public schools" and a "general and uniform system of" schools in which "equal opportunities shall be provided for all students" (see *School Law Bulletin* 28 (Fall 1997): 35–36 and 29 (Summer 1998): 9–18). The case was remanded to Wake County Superior Court to determine whether the *Leandro* rights of the state's children have been violated. That court's opinion and judgment of April 4, 2002, in *Hoke County Board of Education v. State of North Carolina* (Super. Ct., Wake Co., No. 95-CVS 1158), suggests that inadequate public school facilities are not the major problem: "It's not the building—it's what takes place inside that really matters. . . . The critical component of whether or not the children are being provided with an equal opportunity to receive a sound basic education does not lie in a shiny new school or an older school, but rather, the critical component is the quality of instruction and leadership provided by the principal and the teachers who purport to educate the children who attend." ("Memorandum of Decision, sect. 3: Hoke County and Beyond," March 21, 2001, p. 8). See also *School Law Bulletin* 33 (Spring 2002): 16.

2. As Justice Oliver Wendell Holmes once stated, "A limit in time, to tide over a passing trouble, well may justify a law that could not be upheld as a permanent change." *Block v. Hirsch*, 236 U.S. 135, 157 (1921).

3. For purposes of this bulletin, the terms *adequate public facilities* and *concurrency* are used interchangeably.

(e.g., zoning and land subdivision regulations). The development standards in many land development control ordinances adopted by North Carolina cities and counties do not fully take into account a project's potential impact on public facilities, particularly public schools. Some zoning and subdivision regulations allow development projects to be approved with relatively little regard for their impact on public facilities.⁴ Others take into account only facilities located within the confines of the development site or in its immediate vicinity. In any event, public facility requirements for a particular project are typically determined on an ad hoc basis.

In contrast, an adequate public facilities criterion serves as a growth-management technique by demanding that a community measure the impacts of a development project against community standards based on more comprehensive, systemwide analysis.

Relation to Land Development Approvals

Local governing boards already have wide-ranging power to take into account the adequacy of public facilities when deciding whether to rezone land.⁵ However, most APF programs also make adequacy a criterion for various other project approval decisions. Thus the granting of special zoning permits, approval of subdivision plats, and approval of site plans may also depend on a concurrency finding.

Since the strain on school capacity is often associated with population growth, APF programs are almost always applied only to residential development; commercial and industrial projects generally are not required to meet these standards. Nor are all residential developments subject to APF review. Most North Carolina programs exempt minor (i.e., smaller) residential developments from concurrency requirements.⁶

4. Adequate public facilities (concurrency) requirements affect both zoning ordinances and land development control ordinances because both types of ordinance require some form of residential development approval. However, a number of North Carolina local governments have adopted "unified development ordinances" that combine zoning and subdivision regulation in a single ordinance. Coincidentally, virtually all the local governments in North Carolina that have adopted an APF program for public schools or that are seriously considering such a program (i.e., Currituck County, Town of Cary, Cabarrus County, City of Concord, Orange County, Town of Chapel Hill, Town of Carrboro) have adopted a unified development ordinance and have incorporated or are planning to incorporate the requirements into such an ordinance.

5. See, e.g., *Builders Ass'n of Santa Clara & Santa Cruz Counties v. City of San Jose*, 13 Cal. 3d 225, 118 Cal. Rptr. 158, 529 P.2d 582 (1974), *appeal dismissed*, 427 U.S. 901 (1976) (two-year moratorium upheld that would prohibit rezoning of land to residential use unless school district certified availability of school capacity).

6. Unless "exempt" developments actually have a minimal effect on school enrollment or represent forms of development that have been "grandfathered,"

For example, the Currituck County program exempts residential developments of fewer than six units; and the Town of Cary exempts residential developments that either (1) do not involve subdivision plat or site-plan approval or (2) do not exceed one dwelling unit per two acres. The Cary Town Board may also waive applicable requirements for certain "affordable housing" projects so situated that applicable level-of-service standards will not be exceeded by more than 5 percent.⁷

North Carolina Programs

Adequate public facility programs are widely used in communities in states like Washington and Florida, where concurrency with respect to certain types of public facilities is mandated by state legislation; in states like New Hampshire and Maryland, where APF standards are expressly authorized by statute; and in a number of local government units throughout the country. Fewer than half a dozen North Carolina local governments have adopted APF programs, and no state legislation directly addresses either the concept of concurrency or the operation of an APF program with respect to public schools—or for that matter, other public facilities. Thus, APF programs tied to schools are no less common in North Carolina than those tied to roads, parks, utilities, or other public facilities. Nonetheless, by most measuring sticks, the public school APF programs in this state are pioneering programs.

The first APF program for schools in North Carolina was adopted by Currituck County in 1994.⁸ APF standards are incorporated into that county's unified development ordinance and apply to facilities for education, fire and rescue, law enforcement, and other county services. The primary APF criterion is triggered by an application for conditional-use or special-use permits, which are required for major single-family residential subdivisions and multifamily residential developments. (The Currituck County Zoning Board of Adjustment grants conditional-use permits, while the Board of Commissioners grants special-use permits.) Currituck's program was challenged in 1997 in *Tate Terrace Realty*

they may undermine the legal integrity of a schools APF program. See the discussion of the analogous issue in the context of school impact fees in Richard D. Ducker, "Using Impact Fees for Public Schools," *School Law Bulletin* 26 (Spring 1994): 1, 9.

7. Currituck County Unified Development Ordinance § 1402, Appendix (Permitted Use Table) 30.000 (Subdivisions) (1993); Town of Cary Unified Development Ordinance § 5.16.4 (as amended July 22, 1999).

8. The Currituck County School System is the only school administrative unit in Currituck County. The county is one of the few counties in North Carolina without an incorporated municipality.

Investments, Inc. v. Currituck County.⁹ In that case, the North Carolina Court of Appeals upheld the decision of the Currituck County Board of Commissioners in denying a special-use permit for a 601-lot residential subdivision; the commissioners determined that facilities were not adequate to serve the estimated 312 additional students the project was expected to bring into the public schools. The court ruled that the record included sufficient evidence to support the commissioners' decision.¹⁰

In 1999, Cary became the first municipality in North Carolina to adopt an APF program specifically for schools and the first to adopt a memorandum of understanding with a county board of education. Cary's ordinance provisions apply APF standards to all residential subdivisions and site plans, including those for multifamily residential developments. The schools APF program applies to developments located within Cary's entire planning jurisdiction (which includes territory both inside and outside the town's corporate limits). The Wake County Board of Commissioners is not a party to Cary's APF program. The commissioners declined the town's invitation to adopt a joint memorandum of understanding and have not formally agreed to program or fund Cary-area school facilities according to the timetable established by the county board of education and the town governing board.

Cabarrus County adopted APF standards in 1998 in its unified development ordinance, which applies the standards to a range of public facilities other than schools.¹¹ The Cabarrus provisions apply to both large single-family residential subdivisions and multifamily residential developments. More recently, the county joined with all the municipalities in the county to develop a land development ordinance the county and the cities can adopt. This revised development ordinance includes APF provisions that are more detailed than those in the 1998 ordinance. Ironically enough, the revised ordinance (including revised APF provisions) has been adopted by the cities of Concord and Kannapolis but not (yet) by Cabarrus County and the other two municipalities in the county (Mount Pleasant and Harrisburg). Concord and Kannapolis both adopted the APF provisions for schools in their local development ordinances in 2001 but have apparently not yet enforced them.

In addition, Orange County and the municipalities of Carrboro, Chapel Hill, and Hillsborough are in the process of reviewing and revising the documents needed to adopt a concurrency program.

Intergovernmental Arrangements

Perhaps the most distinctive feature of the public school APF programs in North Carolina is the great demand for cooperation they place on several different governmental units and agencies. First, a school district, working within the framework of a statewide educational system, designs, constructs, and operates the public schools serving a new development. In this regard, it plays the role of facility and service provider. Second, the county provides the funding for school construction and may play an instrumental role in developing a reliable capital improvement program for school construction. In this regard, a county plays the role of facility financier. Third, either a city or a county typically exercises land-use planning and growth-management jurisdiction over areas within a school district. In the role of land development regulator, the local government evaluates development proposals to ensure that they provide adequately for school needs. The service/facility provider, the financier, and the land development regulator must all cooperate to create an effective concurrency program for public schools.¹²

The most common mechanism used in North Carolina to ensure that these governmental entities perform their assigned tasks is a memorandum of understanding (MOU) adopted by service/facility provider, financier, and development regulator.¹³ North Carolina jurisdictions with school APF (school concurrency) programs use a MOU to coordinate their actions. A successful APF depends on the voluntary cooperation of the parties; the unwillingness of one party to participate is generally enough to terminate a program. If one of the governmental entities breaches the agreement, little is to be gained by litigation. An additional complication is that some of the actions a local government has to take to advance the APF program—for example, the county's appropriation of

9. 127 N.C. App. 212, 488 S.E.2d 845 (1997), cert. denied, 347 N.C. 409, 496 S.E.2d 394 (1997).

10. Some of the evidence of school inadequacy presented at the commissioners' hearing was unsworn testimony by the planning director, who read aloud a letter from the county school superintendent about the long-term capital facility needs of the school system. The court ruled that the applicant had waived the right to insist upon sworn testimony and to cross-examine the witness.

11. Cabarrus County Code of Ordinances, sec. 66–81 (Jan. 20, 1998).

12. In *William S. Hart Union High School Dist. v. Regional Planning Comm'n of County of Los Angeles*, 226 Cal. App. 3d 1612, 277 Cal. Rptr. 645 (1991), reh'g denied, 227 Cal. App. 3d 846 (1991), the court held that a school district could challenge a county's decision to approve a particular development project on the grounds that the board did not do all it could do under California law to mitigate the adverse impact that the proposed project would have on the schools.

13. In some states (e.g., Florida), adoption of a legally binding interlocal agreement by the school district, the county, and all of the municipalities in the county is a necessary element of a mandated local comprehensive plan and to the implementation of a public school concurrency program. FLA. STAT. ANN. §§ 163.3177(6)(h)(2) (West 2002) and 163.3180(13)(f) and (g) (West 2000).

school construction funds to a school district or a city's adoption of amendments to its zoning or land subdivision ordinance—are legislative in nature, not administrative. In the absence of authorizing legislation, North Carolina local governments are not permitted to contract away legislative authority or to bind themselves to exercise that authority in a particular way through an interlocal agreement.¹⁴

Nonetheless, a memorandum of understanding can help local entities collaborate in educational planning and decision making with respect to population and capacity projections, public school siting, and a variety of other issues. For example, the MOU being considered by one of the school districts in Orange County, by Orange County, and by three municipalities in Orange County calls for development of a capital facilities program that will “utilize a projected growth rate for student enrollment agreed upon by the parties, which growth rate may differ from one school level to another (i.e., number of students per level per year).”¹⁵ Among other subjects, the Orange County MOU provides for four actions: (1) joint development of a realistic capital facilities program for the construction of schools to ensure that enrollments at any school level (i.e., elementary, middle, or high school) do not exceed certain percentages of building capacity; (2) development of school building capacity figures by the school boards and the board of county commissioners; (3) the county’s “best efforts” to provide the necessary funding to carry out the capital facilities program; and (4) the school district’s “best efforts” to construct schools in accordance with the county Capital Improvements Program (CIP). The MOU also states that it represents “a good faith statement of the intent of the parties to cooperate” and is “not intended to and does not create legally binding obligations on any of the parties to act in accordance with its provisions.”

Program Elements

The Capital Improvement Program and Comprehensive Plan

In North Carolina, local boards of education are directed by law to provide classroom facilities adequate to meet state requirements for classroom size and teacher allocation.¹⁶ Moreover, local boards must submit their long-range plans for meeting school facility needs to the State Board of Educa-

tion every five years. Ideally, these school facility capital plans are also integrated into and coordinated with a county capital improvements program adopted by the board of county commissioners and the relevant board of education.¹⁷

Although North Carolina law does not compel a county to adopt a capital improvements program to ensure the financial feasibility of plans for remedying school capacity deficiencies under an APF program, a realistic CIP is almost certainly an essential element of such a program. The significance of a financially feasible CIP adopted by the “financier” of the concurrency program was established in the landmark case of *Golden v. Planning Bd. of the Town of Ramapo*.¹⁸ In upholding the town’s APF ordinance, the New York Court of Appeals based its affirmation on an eighteen-year-old capital facilities program designed to provide “the capital improvements projected for maximum development” set forth in the town’s comprehensive plan.¹⁹ Because of this tie between land development regulation and the scheduling and construction of public facilities construction, the town’s attempt “to phase residential development to the Town’s ability to provide” infrastructure withstood a constitutional challenge.²⁰

In a similar vein, Florida law requires that adoption of a school concurrency program be accompanied by public school level-of-service standards adopted as part of the capital improvements element in the local comprehensive plan. That plan, in turn, shall contain “a financially feasible public school capital facilities program, established in conjunction with the school board, that demonstrates that the adopted level of service standards will be achieved and maintained.”²¹

An APF program must also be accompanied by good faith efforts to resolve existing deficiencies.²² The courts have consistently upheld growth controls imposed pursuant to a balanced and even-handed comprehensive plan designed to

17. Political disputes between boards of education and boards of county commissioners concerning the financing of schools are not uncommon. The statutes establish a procedure for resolving disputes when a school board is dissatisfied with the county appropriation, including the division between current expenses and capital outlays G.S. 115C-431.

18. 30 N.Y.2d 359, 285 N.E.2d 291, 334 N.Y.S.2d 138, *appeal dismissed*, 409 U.S. 1003 (1972).

19. The program included a capital budget providing for the improvements specified in the master plan within the next six years, and, as a supplement to the capital budget, a capital program providing for the location and sequence of additional capital improvements for the twelve years following the life of the capital budget. *Id.* at 294–95.

20. *Id.* at 294–96.

21. FLA. STAT. ANN. § 163.3180(13)(d)(1) (West 2000).

22. See, e.g., *Q.C. Construction Co., Inc. v. Gall*, 649 F. Supp. 1331, 1337–39 (D.R.I. 1986) (invalidating a moratorium pending the resolution of sewer system inadequacies, noting that the expansion of the sewer system had occurred in a “piecemeal fashion rather than according to a comprehensive plan” and citing a number of other cases that had approved development restrictions or moratoria imposed pursuant to a comprehensive plan to remedy deficiencies and that would not impose a permanent ban on development).

14. See *Rockingham Square Shopping Center, Inc. v. Town of Madison*, 45 N.C. App. 249, 262 S.E. 2d 705 (1980); *Bessemer Improvement Co. v. Greensboro*, 247 N.C. 549, 101 S.E. 2d 336 (1958).

15. “Draft School Adequate Public Facilities Memorandum of Understanding,” <http://www.co.orange.nc.us/planning/apfomou.htm>. Last visited May 29, 2003.

16. N.C. GEN. STAT. § 115C-521(a) (hereinafter G.S.).

resolve infrastructure deficiencies. Even where a plan is not in place—or does not address public facility deficiencies—courts have found governmental units to be acting in good faith if planning studies are underway and the analysis generally demonstrates that development restrictions do not serve to disguise ulterior motives for blocking growth.

Program Application and Impact Areas

Two questions of geography are of substantial importance in developing an APF program for schools. The first is “Within what geographic area will the whole program apply?” The second is “Within what geographic area will the adequacy of schools be evaluated when a development application is submitted?”

The most logical, and perhaps most legally defensible, approach to school facilities concurrency is to require that concurrency apply on a districtwide basis; this approach will ensure that standards are applied to all facilities within the control of a particular local board of education. Indeed, Florida lawmakers concur. That state’s law encourages local governmental units to establish school concurrency programs on a districtwide basis. The Cary program, however, was established in a way that considers the adequacy of school capacities in only part of the Wake County School System—the area within the town’s planning jurisdiction, which extends to some areas beyond the town. As a practical matter, therefore, only portions of certain school attendance zones are included in the program. In contrast, the programs in Currituck and Cabarrus counties are designed to apply districtwide, as is the program under consideration in Orange County.

The second determination is the impact area within which to measure adequacy. A countywide or districtwide impact area means that a development application will be denied if enrollment at any one of the three school levels (elementary, middle, and high) exceeds the standard applied throughout the school district. As a result, a developer may be denied development permission if enrollment in the elementary schools, taken as a whole, exceeds the capacity standard for all such schools in the system, even when the development would be located a block away from an elementary school with considerable excess capacity. However, a districtwide impact area does have two major advantages. First, it may be more legally defensible in light of the school board’s obligation to provide “a general and uniform system” of public schools.²³ Second, such a system gives school officials a freer hand to

draw school attendance boundaries without possible adverse effects on land development.

In contrast, less-than-districtwide impact areas may be more effective at preventing individual schools from becoming overcrowded. It is also consistent with the planning idea that development should be steered into areas better equipped to handle growth. One procedure for introducing more flexibility into this approach allows development approval when the adopted level-of-service standard cannot be met in a particular impact area but the unused capacity is available in one or more contiguous impact areas.²⁴ The idea of less-than-districtwide impact areas can also be politically popular. Indeed, in 2002 the Cary ordinance reduced the applicable impact area to the attendance area of each individual school.²⁵

Projecting the Impact of Development Projects on School Enrollment

An important element in an APF program is the forecasting of how new residential projects will affect school enrollments. Local boards of education and local governments generally rely on historical data to develop student-generation rates to apply to future projects. Some jurisdictions develop more than one rate in order to take into account the number of bedrooms and whether dwelling units are single family or multifamily. Others, however, apply the same student-generation rates to both manufactured homes and site-built houses. Most use different rates for each school level (i.e., elementary, middle, or high).²⁶

Determining the Capacity of School Facilities

Level-of-Service Standards

Adequate public facility requirements and concurrency regulations are based on determinations of the capacity of school facilities. A key concept in capacity determinations is

24. Florida law mandates such a requirement if school capacity is available within a district; school adequacy is thus tested on a less-than-districtwide basis. FLA. STAT. ANN. § 163.3180(13)(c)(3) (West 2000).

25. Town of Cary Unified Development Ordinance § 5.16.4 (May 22, 1999) (amended 2002).

26. The Concord ordinance provides for the following student-generation rates/dwelling unit: (1) elementary schools: 0.30; (2) middle or junior high schools: 0.167; and (3) high school: 0.167, for a total student-generation rate of 0.634/dwelling unit. However, these student-generation rates vary among communities. According to an Orange County study, the student-generation rate for existing single-family houses in the Chapel Hill-Carrboro District was 0.57, but the comparable rate for single-family houses in developments currently being built was 0.98. “Development Ordinance Text Amendment—Adequate Public Schools Attachment 3, Questions/Issues Raised at the February 19, 2001, Public Hearing,” Memorandum to Mayor and Town Council of the Town of Chapel Hill from W. Calvin Horton, Town Manager, April 23, 2001, p. 19.

23. N.C. CONST. art. IX, sec. 2(1). See *Leandro*, 346 N.C. at 336; see also *St. John’s County v. Northeast Florida Builders Ass’n, Inc.*, 583 So.2d (Fla. 1991) (ruling that no school impact fees could be collected under a county ordinance until substantially all of the county’s population was subject to it).

level of service (LOS).²⁷ Level-of-service standards are generally thought of as technical standards, but they inevitably reflect concerns about cost and economic feasibility as well. The level-of-service concept in the context of schools is typically based on minimum standards for school construction and maximum class size, as established statewide. In developing concurrency regulations for public schools, local governments generally base their capacity calculations on standards promulgated by the North Carolina State Board of Education and the North Carolina Department of Public Instruction.²⁸ APF programs often exclude temporary classrooms such as modular structures from their calculations of existing classroom capacity and typically use separate standards for elementary schools, middle schools, and high schools. Reasonable, quantifiable standards for capacity and adequacy are particularly important, because level-of-service standards apply to existing schools as well as to future construction.²⁹ If a local government denies development permission on the basis of a level-of-service standard, it is expected to refer to that standard in funding the renovation and expansion of existing schools as well as the design and construction of new schools.

Existing and Committed Capacity

Existing school capacity is a key computation and is, of course, based on the level-of-service standards rather than on actual enrollment figures. A related concept, *committed capacity*, is also used in some concurrency programs. For purposes of calculating school adequacy, it is customary to subtract from existing capacity two figures: (1) the capacity necessary to serve the children who already live in the school district and are expected to "age up" through the school system; and (2) the capacity to serve the children expected to live in dwellings for which development project approvals have been granted but that have not yet been built or occupied. Sometimes this component of capacity is referred to as *reserved capacity*.³⁰

27. In Florida, APF regulations must be consistent with service levels established in the capital improvements element of the local comprehensive plan. FLA. STAT. § 163.3180(13)(b)(2) (West 2000) and the public school facilities element of the plan. FLA. STAT. ANN. § 163.3177(12)(a) (West Supp. 2002).

28. See North Carolina Public Schools Facilities Guidelines, Public Schools of North Carolina, State Board of Education, N.C. Department of Public Instruction (March 2000); North Carolina Public Schools Facilities Guidelines, "Class Sizes and Teacher Allotments" (January 1997).

29. Failure to establish adequate student-generation, capacity, and impact-area standards may invalidate an APF ordinance. See *Rosenburg v. Maryland-National Capital Park and Planning Comm'n*, 269 Md. 520, 307 A.2d 704 (1973).

30. Alternatively, committed or reserved capacity may be incorporated into the methodology for determining school adequacy by simply increasing

Consider, for example, three elementary schools in Moyock and Crawford Townships in Currituck County that have a combined capacity of 1,288 students.³¹ The 2000–2001 enrollment for all three was estimated at 905 students. Projected enrollments attributable to existing development would add an additional 54 students by 2002–2003. Thus school capacity for 383 additional elementary school students was expected to be available in 2002–2003. However, by 2002–2003, development activity already approved (or exempted from the county's concurrency requirements) was expected to add an additional 130 students to the elementary schools in these townships, reducing the capacity available for students from any new development to 153.³²

Planned (Programmed) Capacity

A central aspect of a concurrency program is the notion that determinations of adequacy must take into account school facilities that will be built in the future as well as those that are currently available. Virtually all APF programs credit school facilities for which funds have been legally committed. Most also count future facilities included in capital improvement programs for which sources of funds have been identified. Some jurisdictions, however, refuse to consider schools planned for the distant future. For example, Currituck County considers only planned school facilities expected to be available within the two years following approval of a sketch plan for a proposed development.³³ The City of Concord uses a more complex formula. In certain instances, its ordinance allows school districts to credit the capacity of planned school projects for which funding commitments have been made and that will be available within the five years following the date on which school capacity is calculated—but only if such projects are included in the district's ten-year school facilities plan.³⁴

projected enrollments to reflect estimates of school-age children attributable to residential development in the construction pipeline that will be occupied by the relevant date. Whether this component is treated as increased enrollment or committed capacity, the results should be the same.

31. "Cumulative Total of (Currituck County) School Population Projections (3/7/01)," handout sheet presented by Jack Simoneau, Currituck County Planning Director at program session "Adequate Public Facilities Ordinances" at North Carolina Planning Conference, Charlotte, May 18, 2001.

32. This example involved no planned additions to elementary school capacity from new construction.

33. Currituck County Unified Development Ordinance, sec. 2015(2) (September 18, 1995).

34. City of Concord Unified Development Ordinance, sec. 14.3.6.2 (October 11, 2001). If currently available capacity is inadequate, the "planned capacity" reflected in the facilities plan for the following two years must be taken into account. However, if currently available capacity and planned capacity, taken together, are inadequate, then "future available capacity" is recalculated to consider the next five years of planned capacity. In this latter case, the development application may be approved only if the funding for the planned school projects has been approved or acceptable project-phasing conditions are set forth in the development proposal.

Certification and Allocation of Adequacy

In principle, development approval may be denied or made conditional whenever a district's projected school enrollment exceeds 100 percent of the existing, committed, and planned capacity. However, some North Carolina programs do not in fact restrict or delay development until enrollment exceeds capacity by a certain percentage. For example, the Cary program, which was initiated in 1999, has applied the principle only when the average enrollment-to-capacity level for all eligible elementary schools exceeds 148 percent, when the level for eligible middle schools exceeds 132 percent, or when the level for eligible high schools exceeds 141 percent.³⁵ In 2002, however, the percentages for all three school categories were lowered to 130 percent.

Many APF programs for schools place the responsibility for making capacity calculations and adequacy determinations on the school district. For example, the MOU proposed for the school boards and local governments in Orange County would authorize the school district to issue a certificate of adequacy if the expected future uncommitted capacity exceeds the demand generated by the proposed residential development. In most cases, developers must obtain such a certificate before submitting the development project for approval. Some programs also require that they obtain development approval within a specified period after the certificate of adequacy is issued (e.g., six months).³⁶ An alternative approach requires developers to first obtain a special-use or conditional-use zoning permit that only becomes effective when they obtain a certificate of adequacy. In such a case, the certificate expires if the zoning permit expires.³⁷

All North Carolina's public schools APF ordinances allow excess public facility capacity to be allocated on a first-come, first-served basis. Thus developers "reserve" the fraction of available capacity that corresponds to that required by the development project proposed and approved. Moreover, no quotas or program-based restrictions limit the capacity for which a certificate may be obtained. This feature of the ordinances, however, can result in an erratic pace of local development as developers queue up to take advantage of excess capacity before it disappears. APF programs seem to encourage a certain amount of jockeying for position in the

development-allocation queue. Developers may accelerate or delay their plans in response to public facility capacity changes. Excess capacity encourages developers to move as fast as possible to apply and qualify for an allocation of excess capacity. Once the excess capacity is gone (even temporarily), a local government must decide whether to continue to accept development applications and assign priorities to them. If it does so, it may encourage developers to present their proposals sooner than they would otherwise. If, on the other hand, local government places a moratorium on applications, it can expect a flood of applications when capacity is expanded. In either circumstance, the pace of development and the rate at which development applications are received can be erratic.

"Advancing" Capacity

In North Carolina, a system of locally provided public schools provides general societal benefit, while state and local government taxpayers shoulder most of the funding for those schools. Indeed, the location of a school (particularly an elementary school) within a residential development has long been seen as a positive selling point for the developer. It is generally understood that if school construction lags behind demand, the public is responsible for closing the gap. Indeed, APF programs are based on the premise that the public must act in good faith to cure any inadequacies in capacity. However, the question arises whether, if ever, and, if so, how developers should be allowed or expected to voluntarily contribute to the public schools in order to speed up the planning and building of schools.

North Carolina local governments that adopt APF requirements for schools generally do not require developers to reserve land for school sites for future purchase, to dedicate land free and clear for such sites, or to pay fees in lieu of doing so.³⁸

However, it is no longer unusual for developers of large-scale residential developments to offer to donate land for a school site or to offer other services or supplies for use in

35. Town of Cary Unified Development Ordinance, sec. 5.16.4 (July 22, 1999).

36. See, e.g., *id.* at sec. 5.16.2(a); and sec. 5.16.5.

37. The APF ordinance proposed for Orange County originally called for the certificate of adequacy to be issued first. However, several local governments were concerned that developers might try to "reserve" capacity for development in excess of what might be approved as part of the zoning process. The draft ordinance under consideration by Orange County, Carrboro, Chapel Hill, and Hillsborough calls for development approval to precede application for a certificate of adequacy.

38. Local governments are empowered to require that land be reserved for school sites during the land subdivision and development approval process. The North Carolina land subdivision control enabling statutes (G.S. § 160A-372 and G.S. § 153A-331) authorize both cities and counties, in cooperation with local boards of education, to require subdividers to reserve land for later purchase as a school site. The reserved land may not be subdivided or developed for a period of eighteen months, beginning on the date the final subdivision plat is approved. If the local government does not purchase the land within that period, the reservation is lifted. However, although land-reservation provisions for school sites are sometimes included in local government development ordinances, they are rarely, if ever, used.

During the development permitting process, some local governments impose developer exactions—formal conditions to approval that require developers to contribute land for a public facility at the developer's own expense. However, North Carolina land subdivision control and zoning

connection with a school.³⁹ If the purpose of such a contribution is to enhance the capacity of the public school system in order to obtain a certificate of adequacy, the action is sometimes referred to as an *advancement of capacity*. The City of Concord ordinance provides for such offers and establishes five requirements for their acceptance. These requirements include:

1. inclusion of the facility in the capital improvement program of the applicable service provider;
2. an estimate of the total cost needed to construct the improvement and a description of the cost "participation";
3. a schedule for commencement and completion of the improvement, with specific target dates;
4. a finding that the improvement is consistent with the area plan and, if applicable, the city's comprehensive plan; and
5. reimbursement of the pro-rated cost of the excess capacity, at the option of the city council, if the contribution will result in capacity exceeding the demand generated by the proposed development.⁴⁰

enabling statutes do not expressly authorize cities and counties to require developers to dedicate land for a public school site, to make improvements to an existing school site, or to pay a fee in lieu of making an "in-kind" contribution. As a practical matter, developer exactions with respect to schools are rarely used.

One exception to local governments' unwillingness to impose developer exactions is the system of public school facility impact fees charged by Orange and Chatham counties. These fees apply to most new residential subdivisions and land development projects. The funds received for each project are segregated and earmarked in a way that ensures they will be used to fund schools for the children who will reside in the developments. Under the proposed Orange County APF ordinance, a developer would be charged an impact fee only if the development is allowed to proceed under the terms of the APF provisions. Of course, the development may proceed under those terms only if currently available and planned school capacity is adequate to meet the projected enrollment increases that would be caused by the development. In this instance, *planned school capacity* may include schools to be constructed or expanded that will be funded in part by impact fees. Thus school impact fees paid by an Orange County developer may be used to cure potential capacity deficiencies to which the developer's project may eventually contribute.

39. See Richard Stradling, "Strings often attached to cash, land donated for schools," *News and Observer* (Raleigh), July 9, 2001, 1-A. The reporter lists eight instances in the Triangle area of North Carolina in which a developer has donated land or money for a school site when initiating a development project. See also T. Keung Hui, "Developer, Cary near school deal," *ibid.*, March 9, 2002, 1-B. The article describes an agreement between a developer, the Town of Cary, and the Wake County Board of Education under which the town will spend \$300,000 to buy a site for a county elementary school, the developer will donate \$5.5 million to construct the school on the site, the town will allow the developer to more than double the number of homes planned for the residential subdivision, and the school system will set aside at least half of the seats in the new school for students living in the developer's subdivision.

40. City of Concord Unified Development Ordinance, sec. 14.2.9.1 (October 11, 2001).

A somewhat different approach has been used by Cabarrus County in reviewing development proposals under its current ordinance. There, the Board of Commissioners is authorized to make a finding that capacity is adequate if the developer offers an appropriate contribution to school facility expansion. These measures generally take the form of a monetary donation for each lot in the subdivision, but donations of land and traffic improvements have also been accepted. The county has accepted some nineteen *donations to adequacy* thus far; thirteen of them have been monetary, based on a contribution of \$500 per subdivision lot.⁴¹

Enabling Authority

In certain states, like Maryland, legislation authorizes APF programs or concurrent management generally but does not expressly mention public school facilities.⁴² In Washington, public schools are among the types of public facilities that are subject to state concurrency requirements expressly listed in state planning goals.⁴³ In other states, like Florida, the authority for such programs is implied by statutory requirements for, or limitations on, such programs.⁴⁴ In California, state legislation limits the power of local governments to deny approval for development projects on the basis of inadequate school capacity but authorizes local governments to require certain mitigation measures (e.g., mitigation fees, land dedications) as a condition of development approval.⁴⁵ In yet other states, APF programs or concurrent programs have been adopted under enabling authority for general zoning, land subdivision control, or general development regulation.

North Carolina's local government zoning enabling statutes, G.S. 160A-383 (cities) and G.S. 153A-341 (counties), specifically mention that a purpose of zoning is to "facilitate the adequate provision" of public facilities.⁴⁶ This and other

41. "Donation to Adequacy; Capital Reserve 450-00-00-6-7220-6518," Cabarrus County Planning Division Work Sheet (January, 2002). The ordinance provides no formula or methodology for figuring an appropriate "donation" to avoid a suggestion that the contribution is compulsory. The factor of \$500 per lot was reflected in the first such contribution made by a developer under the APF provisions of the ordinance, and many of the developers that have sought to make an "adequate" contribution have relied on the same method of determining their offered donation.

42. See MD. CODE ANN., art. 66B, § 10.01 (Michie Supp. 2002).

43. WASH. REV. CODE § 36.70A.020(12) (2003). The goals are provided to guide local plans and regulations to ensure that public facilities and services are "adequate to serve the development at the time the development is available for occupancy and use without decreasing current service levels below established minimum standards."

44. See FLA. STAT. ANN. § 163.3180(13) (West Supp. 1998). For a historical summary and comprehensive assessment of school concurrency programs under Florida law, see David L. Powell, "Back to Basics on School Concurrency," *Florida State University Law Review* 26 (Winter, 1999): 451-86.

45. CAL. GOV'T CODE § 65996 (West Supp. 2003).

46. Recent case law (e.g., *Homebuilders Assoc. of Charlotte v. City of Charlotte*, 336 N.C. 37, 43-44 (1994)) suggests that the grants of power found

similar statutory language in the New York zoning enabling legislation was found sufficient to authorize the well-known staged development program adopted by the Town of Ramapo, New York, which was upheld in *Golden v. Ramapo*.⁴⁷ The question of whether adequate enabling authority is available may inevitably be limited to considerations of how the authority is exercised. In any event, any determination of whether such regulations are authorized under state law is likely to depend on (1) the methodology and analysis upon which the ordinance is based, (2) the types of development permission that are subject to the APF criteria, and (3) how the comprehensive plan and capital improvement program are linked to the ordinance.

Takings Challenges

The Fifth Amendment to the U.S. Constitution provides that private property "shall not be taken for public use without just compensation." The primary purpose of this clause is to "bar government from forcing some people to bear alone burdens that, in all fairness and justice, should be borne by the public as a whole." The Takings Clause was originally applied only to physical appropriations of property, but courts have long recognized that regulations and other restrictions on property will be treated as "takings" if they go too far. One "categorical rule" enunciated by the U.S. Supreme Court is that a taking occurs whenever a regulation denies the owner all economically beneficial or productive use of land. In most other instances, whether a regulatory program constitutes a taking depends on a balance of several

factors first set forth in *Penn Central Transp. Co. v. New York City*:⁴⁸ (1) the economic impact of the regulation; (2) the extent to which the regulation interferes with distinct investment-backed expectations; and (3) the character of the governmental regulation.

A regulation may be an unconstitutional taking *on its face* or it may be a taking *as applied* to a particular property. To be ruled a taking on its face, a regulation must be so restrictive that no application of its requirements will avoid a taking. A regulation that is not a taking on its face may, nevertheless, be a taking as applied. A regulatory program may not be a taking as applied to most of the property it covers but may be a taking as applied to other, specific properties.

Disguised Moratorium/Unreasonable Delay

One possible challenge to an APF program is an allegation that the program results in an unconstitutional taking because it effectively establishes an unreasonable moratorium on development. Moratoria are used widely among land-use planners to protect the status quo while formulating a permanent development strategy. Under the terms of an APF or concurrency program, a property owner may be prevented from developing a parcel of land until public projects to remedy certain deficiencies are funded and constructed. In *Ramapo*, for example, New York's highest court sustained the town's ordinance even though certain public facilities and improvements necessary to allow development in some areas to proceed were not scheduled for construction for eighteen years. The court held that the ordinance was not a taking on its face, in part because the plaintiffs presented no evidence that the ordinance would necessarily prevent property owners from developing land for an unduly long period of time.

Since *Ramapo*, few court decisions have comprehensively addressed the constitutional issues involved with concurrency programs. However, a recent U.S. Supreme Court decision in *Tahoe-Sierra Preservation Council, Inc. v. Tahoe Regional Planning Agency* supports the view that a development moratorium may be used as a legitimate feature of a land-use and environmental-management program.⁴⁹ In *Tahoe-Sierra*, the high court was unwilling to conclude that a thirty-two-month moratorium on development in the Lake Tahoe Basin was a taking per se. The purpose of the moratorium was to allow the planning agency to develop a detailed comprehensive land-use plan for the area. The parties stipulated that several formally adopted moratoria temporarily deprived petitioners of all economically viable use of their land. Nonetheless, the Court majority observed that

in North Carolina General Statutes 153A and 160A, including that found in the zoning and land subdivision control enabling acts, should "be construed to include any additional and supplementary powers that are reasonably necessary or expedient to carry them into execution and effect." But see *Smith Chapel Baptist Church v. City of Durham*, 350 N.C. 805, 517 S.E.2d 874 (1999) (fees charged pursuant to Durham program designed to satisfy the EPA's National Pollution Discharge Elimination System's permit requirements for pollution control of stormwater discharges exceeded city's enabling authority).

47. 30 N.Y.2d 359, 285 N.E.2d 291, 334 N.Y.S.2d 138, appeal dismissed, 409 U.S. 1003 (1972). The program took the form of an amendment to the town's zoning ordinance whereby subdivision development would not be permitted until certain public facilities (i.e., roads, public schools, drainage improvements, parks, and water and sewer facilities) reached specified levels of service based on a point system, all according to scheduled facility completion dates included in the town's eighteen-year capital improvement program.

New York's zoning enabling legislation (like North Carolina's based on the Standard State Zoning Enabling Act) does not specifically authorize "sequential" or "timing" controls on development. It does, however, state that "[zoning] regulations shall be made in accordance with a comprehensive plan and designed to . . . facilitate the adequate provision of transportation, water, sewerage, schools, parks and other requirements." N.Y. TOWN LAW § 263 (McKinney 1965). New York's highest court held that "phased growth is well within the ambit of existing enabling legislation." 285 N.E.2d at 300.

48. 438 U.S. 104, 123-24 (1978).

49. 535 U.S. 302 (2002).

a permanent deprivation of the owners' use of the entire area is a taking of "the parcel as a whole," whereas a temporary restriction that merely causes a diminution in value is not. Logically, a fee simple estate cannot be rendered valueless by a temporary prohibition on economic use, because the property will recover value when the prohibition is lifted.⁵⁰

The Court refused to adopt a categorical rule that any moratorium was a taking, instead ruling that a taking challenge to a moratorium must be evaluated in terms of the three-prong balancing test from *Penn. Central*. Nonetheless, the Court cautioned—apparently referring to a circumstance in which a regulation was challenged as applied—that "[i]t may well be true that any moratorium that lasts for more than one year should be viewed with special skepticism."⁵¹

No case cited in *Tahoe-Sierra* involved an APF or concurrency program. Whether a local government's interest in coordinating the timing and sequencing of land development with the provision of public facilities is comparable in weight to a local government's interest in preparing a long-range land-use plan is unclear. The way a court applies the three-prong balancing test to the features of an APF program will depend on the features of the program, especially the government's demonstrated need for a timing-and-phasing program for development. A carefully prepared comprehensive plan, CIP, and APF ordinance can be very helpful in defeating this type of challenge.⁵²

An unusual example of how a prohibition on development because of inadequate school capacity can result in a taking comes from the 1996 Maryland case, *Steel v. Cape Corp.*⁵³ The Cape Corporation (a development company) owned land zoned OS (Open Space), a zoning-district designation that apparently permitted virtually no development of the property. Anne Arundel County somehow applied that designation to the property by mistake. Once the error was discovered, the developer petitioned to have the land rezoned to R5 (a low- to medium-density residential zoning classification) to allow the land to be subdivided for single-family residences. This type of residential use was apparently the only developed use of the land economically feasible and consistent with the area surrounding the site. However, the County Board of Education determined that if the property were rezoned and

subdivided at the density permitted, the county school system would have inadequate capacity to handle the projected number of students for the next six years.⁵⁴ When the county refused to rezone the property for this reason, the property owner claimed a taking. The Maryland Court of Appeals held that the county's actions would result in the loss of all economically viable use for Cape's property for a period of the next six years and that the prospective moratorium was a taking as applied.⁵⁵

A related but different claim that could be brought against an APF program is that even if the length of time a property owner must wait for a governmental agency to build a facility is reasonable, it is unrealistic to expect the public agency to provide the facility "on time." In *Ramapo*, the town was both the provider for most of the public facilities included in the program and the land development regulator. The developer argued that all the public facilities called for in the town's CIP were unlikely to be provided on schedule. The New York Court of Appeals replied:

As the Town may not be held to its program, practices do vary from year to year, and fiscal needs cannot be frozen beyond review and recall" (citations omitted), the 'patient owner' who relied on the capital program for qualification then is said to face the prospect that the improvements will be delayed and the impediments established by the ordinance further extended by the Town's failure to adhere to its own schedule.

The reasoning, as far as it goes, cannot be challenged. Yet, in passing on the validity of the ordinance on its face, we must assume not only the Town's good faith, but also its assiduous adherence to the program's scheduled implementation. We cannot, it is true, adjudicate in a vacuum and we would be remiss not to consider the substantial risk that the Town may eventually default in its obligations. . . . The threat of default is not so imminent or likely that it would warrant our prognosticating and striking these amendments as invalid on their face. When and if the danger should materialize, the aggrieved landowner can seek relief . . . declaring the ordinance unconstitutional as applied to this property.⁵⁶

The inability of public agencies operating under a concurrency program to provide school facilities according to an adopted CIP raises two problems for the program's integrity. The first problem stems from the possibility that a postponed school project will extend the period of a de facto development moratorium, effectively creating a "set of rolling

50. *Id.* at 331.

51. *Id.* at 341.

52. One authority has declared, "Takings challenges are almost always ineffective against timed and sequenced growth if based upon an integrated and comprehensive plan." Robert H. Freilich, *From Sprawl to Smart Growth: Successful Legal, Planning, and Environmental Systems* (Chicago: Section of State and Local Government Law, American Bar Association, 1999), 100, n. 205.

53. 111 Md. App. 1, 677 A.2d 634 (1996).

54. *Id.* at 640.

55. It is unclear from the decision what weight, if any, was given to the fact that the land had been so restricted during the period prior to the county's refusal to rezone it.

56. *Ramapo*, 285 N.E.2d at 298-99, n.7.

moratoria that, with the benefit of hindsight, might properly be characterized as the functional equivalent of a permanent taking.”⁵⁷ Second, the failure to provide school facilities on time may raise doubts about the legitimacy of the APF program and the good faith of the governmental units involved. Evidence that agencies acted capriciously in establishing the regulations or that they failed to act diligently and in good faith could support a conclusion that the regulations constituted a taking.

Certain features may be added to an APF ordinance to make it more legally defensible with respect to both “facial” and “as applied” attacks. The first feature is particularly important if the ordinance applies only to residential development. If the owner of vacant, residentially zoned land is precluded from subdividing it for a long time because of a concurrency requirement, there may well be no alternative nonresidential use he or she can legally or practically make of the property. In such a case, the owner may be without any economically beneficial use of the property during the moratorium. To mitigate the impact of an APF-based moratorium, therefore, it may be wise to exempt from an ordinance not only the issuance of zoning/building permits for vacant single-family residential lots but also minor subdivisions below a certain threshold number of lots. These concessions will make it possible for local governments (and boards of education) to assert that not only is the development delay temporary but also that there is a residual, productive use of these parcels of land that is permitted during the period of delay. Thus an ordinance can allow some base level of development on all parcels, regardless of whether certain schools have excess capacity.

A second feature an ordinance can include to make it defensible from the claim of taking is some sort of administrative procedure authorizing the regulating government to mitigate or waive the development prohibition in cases of hardship and other special circumstances. These “safety-valve” provisions allow a local government to take into account the peculiar circumstances that develop when the ordinance is applied to a particular property. Only after exhausting all such administrative remedies would a property owner be certain of the specific ways the regulations apply to his or her own property.

Mitigation Fees or Advancing Capacity as a Developer Exaction

A second and wholly different type of taking claim derives from the fact that some APF ordinances provide a mechanism by which developers may avoid a moratorium. Under this

provision, they may either pay a mitigation fee or “advance” the facilities that are deemed deficient by supplying them to the governmental entity (or paying for them) without reimbursement. A concurrency ordinance may provide that such contributions are not required under the ordinance; that, if made, they are voluntary and not compulsory; and that any measures for making contributions set forth in the ordinance are merely suggestions. Nonetheless—however described—these contributions can legitimately be viewed as prerequisites to development approval because without them development would not proceed. Such arrangements thus carry the potential risk of being characterized as developer exactions. In order to be valid, requirements that public facilities be provided at the developer’s expense as a condition of development approval must meet the following constitutional test: the contribution must be roughly proportionate to the need for the public facility generated by the development for which they were contributed.⁵⁸ In some cases, these advancements to capacity or payment of mitigation fees are not tailored closely enough to the particular development’s impact on the school system. A developer might be induced to pay a disproportionately high share of the cost of such facilities. If a court finds these fees or advancements to be disproportionate, it could conclude that they constitute a taking.

Conclusions

In North Carolina, it is uncommon for local governments to restrict land development and community growth to times when school capacity is or will soon be available to serve that growth. It is far more common for school-facility funding to be driven by school enrollment growth than for that growth to be determined by a county’s capital improvement plan. However, as hard-pressed local governments and boards of education cast about for new sources of funding for school facilities and overcrowding of certain schools continues, local governments may see methods of linking the rate of community growth to the capacity of school facilities as increasingly attractive.

As APF (or concurrency) programs for schools are relatively new in this state, there has not yet been time to fully evaluate them. Their impact depends on whether a school concurrency program is based on the entire school district or on individual school attendance zones. If the adequacy of

57. See *Tahoe-Sierra* at 333.

58. *Dolan v. City of Tigard*, 512 U.S. 374 (1994). See also *Beaver Meadows v. Board of County Commissioners*, 709 P.2d 928 (Colo. 1985) (county could deny planned unit development approval on that basis of lack of adequate off-site road capacity but could not approve the project and then apportion the cost of building the facilities disproportionately to the developer).

4

Types of Contemporary Growth Management Regulations

This chapter describes contemporary growth management programs in operation. Fifteen years elapsed between the conclusion of events described in the previous chapter and the preparation of this book, but the history of that period is told better by describing the contemporary programs that grew out of it than by presenting a continuing historical narrative. The descriptions provided in this chapter provide the context for the analysis contained in the last part of the book.

PROGRAM TYPES

Four basic types of regulatory growth management programs are in effect today:

- Adequate public facilities requirements
- Growth phasing programs
- Urban growth boundaries
- Rate-of-growth programs

The programs are quite different in philosophy, operation, and effect. Some communities have adopted more comprehensive regulatory structures that include aspects of more than one of these types, but the types themselves are quite distinct.

another hundred miles of streets would; where is the breaking point? Although a school may be "at capacity," it is always possible to squeeze in a few more rows of desks; when does the capacity really become a problem?

Typical subdivision regulations simply do not address these basic community issues. Some might argue that zoning should be tailored to the development capacity of a site as determined by public facility capacities. That argument misses a fundamental point—although most of the zoning map is relatively static, the capacity of public facilities changes constantly as new facilities are built and new development absorbs existing capacity. If the community prepared a zoning map designating permitted uses and intensities based on available capacities in 1989, it was almost certain to be wrong by the time this book was published. Certainly most communities change small parts of the zoning map each year, but most of the map remains basically the same from year to year; public facility capacities change almost daily. Thus, attempting to map the capacities with anything other than a dynamic, automated system, makes little sense; running such a constantly changing map through the rigors of official adoption involved in approving a zoning map, often requiring several weeks in the process, makes none.

Thus, many communities today adopt ordinances requiring that developments not be approved unless adequate public facilities are currently available, or will be available by the time that demand from the new development requires that capacity. For example, Broward County, Florida (Ft. Lauderdale is the county seat) requires that development proposals meet adequate public facility requirements for ten different types of facilities: regional roadway network; road rights-of-way; access to major and collector roads; surface water (storm-water) management; water supply; sewage treatment; solid waste collection and disposal; regional and local parks; school sites and buildings; police and fire protection (James Duncan and Associates and Kelly 1991a; ordinance available in James Duncan and Associates and Kelly 1991b). Vermont's Act 250 (see Chapter 6) contained a similar list. Colorado has long required that counties make findings as to the adequacy of water supply and wastewater treatment arrangements before approving subdivisions.¹ Under the "currency" requirements of a 1986 state law, Florida now requires that all local governments adopt standards for the adequacy of a variety of public facilities (see Chapter 6).

Anyone without a great deal of experience in planning matters might reasonably ask how communities have survived without such basic requirements in their local ordinances. The answer is, "Often rather poorly."

If community growth is moderate, excess capacity in existing sys-

ADEQUATE PUBLIC FACILITIES REQUIREMENTS

Subdivision regulations, described in Chapter 2, require that public improvements such as roads, drainage facilities, utility lines, and even street lights and signs be provided within the subdivision. Some communities use the subdivision process to require developers to provide fringe facilities, such as a turning lane or traffic light at the entrance to a new development.

However, nothing in a typical set of local subdivision regulations addresses the larger community issues:

- Can the street outside the development, or the street or highway into which it in turn connects, absorb more traffic?
- Does the sewer line in the area have additional capacity, or is there even a sewer line in the area?
- Can the drainage channels downstream from the site handle additional run-off?
- Does the water system have enough raw water, enough flow, and enough pressure to serve the site?
- Do the central sewer and water treatment plants have enough additional capacity to serve this development?

These are all questions to which there are readily ascertainable engineering answers. A sewer line is either full or it is not. Similarly, a water treatment plant or a drainage system has a determinable capacities. The traffic capacity of a road involves some judgment calls, all revolving around the question of how much congestion the public is willing to tolerate at rush hour; however, once that judgment has been made, the determination of whether the road can handle additional traffic within those limits can be objectively answered.

Some communities may also want to ask questions that are somewhat more difficult to answer:

- Can the schools hold additional students?
- Can the police department serve the area?
- Will there be adequate fire protection?
- Can the public library serve the new development?

Although there are cases when the answer to one of these questions is an unequivocal "No," in other cases the judgment is more complex. Driving down another mile or so of streets in a suburban area will probably not greatly tax a busy police department; on the other hand,

it reaches the last step before generating sales and a recovery of investment. The problem can be large. For example, when Westminster, Colorado, prepared a detailed study of its development capacities and demands prior to adopting the second phase of a growth management plan in 1978, it found that its governing body and planning commission had approved far more developments than the city could serve in the reasonable future. Developments (and parts of developments) approved by the city but not yet containing buildings included 3,630 "permit-ready" platted lots, for which all city requirements had been completed, more than 1,000 additional lots platted but unimproved and thus not "permit-ready," more than 2,000 acres (not lots) of potential residential development in approved active development, and an additional 2,500 acres of potential residential development in approved but currently inactive projects. To place those figures in perspective, the city by that time had enough capacity to serve only 2,600 additional dwelling units (fewer than the number that could be placed on "permit-ready" lots) over the subsequent two to three-year period (Westminster, City of 1978b, charts 78C(1) through 78C(4) and Report B, p. 13). Westminster's problem was compounded by the fact that it needed the "tap fees" (connection fees imposed on new development, now often called "impact fees") from new development to amortize substantial debt incurred in the early 1970s in order to extend major utility lines into undeveloped and developing areas (Westminster, City of 1978). The Westminster situation in 1977 and 1978 is described in somewhat more detail in Kelly 1982 and in depth in Snyder 1982.

The circumstances of a Westminster or a Livermore clearly reflect a lack of planning that led, in the face of significant demand (which both Livermore and Westminster faced), to a community crisis. With a significant investment held in abeyance perhaps indefinitely, a rational developer may see little choice but to sue. However, public officials in such a community are likely to be little happier with the moratorium than the development community. A community often adopts a moratorium because political pressures on public officials or their duties preclude their allowing continuing overloads on public systems. For example, Westminster needed the revenue from new development to amortize bonded indebtedness on an extensive network of sewer and water lines constructed into developing areas. The city council there adopted an initial brief moratorium and a subsequent growth management program, in spite of that need, because the city lacked the treatment plant capacity and raw water necessary to serve the demand (Westminster, City of 1978; Snyder 1982, Kelly 1982).

Just understanding the problem is not enough; a community needs

tems may be adequate to absorb additional growth. Further, local residents may to some extent tolerate increased traffic congestion and crowding in the schools as necessary results of growth. However, in a growing community, eventually some system is likely to fail. The result in such circumstances is typically a building "moratorium," during which the community refuses to issue building permits for new development (see, for example, Greenberg 1974; for a discussion of the legal implications of a moratorium, see Kelly 1984). In Livermore, California, a moratorium was adopted by citizen initiative, resulting from obvious frustration with the impacts of growth. The initiative imposed a moratorium on the issuance of building permits until both double sessions in the school and water rationing were eliminated and sewage treatment was brought into full compliance with applicable regulations (Williams and Taylor 1985, pp. 164-167; LeGates and Nikas 1989, p. 20). The California Supreme Court upheld the program (opinion quoted and analyzed in Williams and Taylor 1985).² Livermore subsequently replaced the moratorium with a rate-of-growth program (James Duncan and Associates and Kelly 1991a).

The Livermore case raises an additional issue that should be mentioned briefly, although a detailed analysis of it is beyond the scope of this work. Since the first planning and zoning enabling acts were written in the 1920s, there has been an underlying notion that planning should provide guidelines for zoning and land use decisions, as well as capital investments and other community decisions. Although that notion has at times been lost in practice, the opportunity for planning remains. Local procedures that involve the planning commission in all or most such decisions are designed to enhance that opportunity. When the system fails to the point that the governing body delegates control of the policy issue to the citizens of the community through referendum, the community loses the opportunity for planning. There is no logical way for the voters as a body politic to engage in rational planning (see, for example, Callies, Neuffer, and Calboso 1991; Curtin and Wood 1989; as well as Callies 1980; Cronin 1980; and other articles in Schmidman and Silverman 1980).

A moratorium is a worst-case result for all parties. Because the moratorium generally takes effect at the building permit stage, it comes after the community has granted development approval. That often occurs at both the zoning and subdivision stage, and sometimes after developers have made significant investments in site improvements. A developer fares better under a program that denies a development proposal early in the process because of a lack of public facilities than under one that allows the development to proceed, with a substantial investment in the project, and then stops it before

City to the intersection of the two expressways" (Williams and Taylor 1985, p. 106).

Although both programs were more effective in ensuring the availability of at least some public facilities than a traditional program, neither guaranteed that all public facilities would be available. Recall, for example, that in Ramapo a total of 23 points signified the immediate availability of all designated public facilities, but the program required only 15 points. It would have been theoretically possible under the Ramapo program to obtain development approval for a project with no road access or with completely inadequate off-site drainage capacity. Such an extreme case might have been unlikely to occur, but it is not at all improbable that, even under such a program, a community may approve a development without the full availability of public facilities.

Growth phasing remains a popular type of growth management program. For example, four of eight programs included in a recent national study of large-scale growth management programs were classified by the authors as "growth phasing" programs (James Duncan and Associates and Kelly 1991a). Those included a comprehensive growth management package in Montgomery County, Maryland, described in more depth below, and the Westminster program, which also includes adequate public facilities requirements. However, it also included current programs in both San Jose and Livermore, California, which are based entirely on the concept of growth phasing.

The Livermore program is largely based on timing. The city adopts a new "Housing Implementation Policy (HIP)" every third year. Key to the HIP is a growth rate established in the policy, based on current public facility capacities, as well as environmental issues and the availability of jobs. Each triennial policy also establishes priorities for the type and location of development that the city desires during the planning period; and staff uses those priorities to rank project applications during that period (see, generally, James Duncan and Associates and Kelly 1991a; and LeGates and Nikas 1989; copy of implementing ordinance included in James Duncan and Associates and Kelly 1991b).

San Jose, California, phases growth in one geographic area of the city, called the "Evergreen Area." Like the growth phasing program in Livermore, the San Jose program was adopted by the city council after an initial moratorium adopted by citizen initiative in 1973. The city staff prepares an "Evergreen Area Monitoring Report" each year, and that report provides the basis for establishing growth guidelines for the following year. The city council then allocates to the Evergreen Area a specified number of new dwelling units, based

adequate public facilities standards in its local ordinances. When Chester, Connecticut, denied subdivision approval to a project because the local planning commission found that the road leading to the subdivision was "inadequate to provide safe access and egress to the proposed lots for either residents or emergency vehicles," the Connecticut Supreme Court reversed the town's decision because there was nothing in the subdivision ordinance requiring adequate access to the site and the developer had apparently agreed to meet all the requirements that were in the ordinance.³

How do adequate public facilities standards manage growth? There are two answers to that question. First, one of the dominant concerns in rapidly growing communities is the availability of public services; adequate public facilities standards address that concern directly by insuring that new development does not take place unless the facilities are available to support it. Second, an adequate public facilities ordinance directly affects the location of growth by providing additional "incentives" to ensure that growth locates near existing public facilities (see more detailed discussion in Chapter 5).

GROWTH PHASING PROGRAMS

A growth phasing program regulates the location and timing of new development, generally based on the availability, or presumed availability, of public facilities. In principle such a program is thus somewhat like an adequate public facilities program; however, in practice it is quite different.

The Ramapo program described in Chapter 3 is an early example of a growth phasing program. It focused primarily on the timing of growth by allocating points to development based on the availability of public improvements; it was coupled with a plan that called for the installation of necessary public improvements throughout the community over an eighteen-year period (see, generally, Chapter 3 and sources cited there). Clearly the concept of the program was that development would take place generally where public facilities were readily available, enabling developers to earn the "points" necessary under the program, before it took place in areas with few or no public facilities. The timing of development would thus generally follow the timing of public improvements, as described in the plan.

The Clarkstown program, also described in Chapter 3, was a growth phasing program more clearly directed at locational phasing. To quote again from Norman Williams, the intent of the Clarkstown plan was to "concentrate new residential development in the area around New City, and along a corridor extending south from New

munities like San Jose, that additional step may be relatively complicated (see James Duncan and Associates and Kelly 1991a). Developers and some observers view the proliferation of permitting requirements as a major impediment to the provision of affordable housing (see a number of separate chapters in Bosselman, Feurer, and Siemon 1976; for a 1991 discussion, see Advisory Commission on Regulatory Barriers to Affordable Housing 1991). A community can easily integrate adequate public facilities standards into existing development review processes, thus making the operation of such a program often simpler than the operation of a growth phasing program.

There is a political side to all of this. In communities that have experienced a recent crisis, the concern over growth may focus on traffic or on the availability of water. However, a sewage treatment plant that is at 99 percent of capacity or a water system that is nearing the point of overload are simply not the kinds of things that engender much casual conversation within a community. On the other hand, the perceptions of growth do generate discussion and concern. One of the primary perceptions of growth relates to suburban "sprawl." A 1974 publication, *The Costs of Sprawl*, documented these costs in fiscal terms and provided a financial incentive for communities to attempt to limit sprawl, regardless of whether public facilities are generally available (Real Estate Research Corporation 1974). Although not all analysts agree that the economic impacts of sprawl are entirely negative (see, generally, Chapter 7), there are other problems with sprawl. Those include both the consumption of a finite resource and some intangible perceptions about desirable urban form (see Chapter 7).

The fact is that adequate public facilities may be available in a relatively remote location. It is not unusual for a community to extend major public facilities to a remote industrial plant or an airport, thus making those same public facilities available to a strip of intervening land (see general discussion in Chapter 5); some of that land may be relatively remote from the community, and its development may be perceived as contributing to sprawl. A requirement for adequate public facilities for new development would not preclude the development of such property, but a phased development scheme might.

Thus, a critical difference between the two types of programs is often the purpose of the program. Those drafting the language for adopting a program may prepare a purpose statement with recitations of the limited availability of public facilities. That may be the real purpose of the program, but the city may include such language just because the city attorney believes (probably correctly) that tying

on the staff analysis of existing and projected road capacity (see, generally, James Duncan and Associates and Kelly 1991a).

As with the Clarkstown and Ramapo programs, there is nothing in the later growth phasing programs in Livermore or San Jose that ensures that actual capacity will be available to serve new development or that the community will permit new development to the extent of available capacity. In these programs, the growth phasing begins with a concept of adequate public facilities that the community translates into a simpler allocation of new dwelling units to be permitted.

Why would a community adopt a growth phasing program, rather than a set of adequate public facilities standards, if both accomplish the same thing? Although it is not possible to document here the thought processes of those who have made all the decisions, there are two probable answers to that question. One possibility is that the growth phasing program may appear simpler than adequate public facilities standards.

First, growth phasing programs are generally simpler for the public and for many developers to understand than adequate public facilities requirements. With an adequate public facilities ordinance, it may not be possible to determine whether any development, or how much development, can take place at a particular location without making a reasonably detailed analysis of each affected public facility. Under a growth phasing program like those in San Jose and Livermore, a citizen or a developer can easily determine that the community will permit 100 more units, 1,000 more units, or no more units, in a particular area during a particular period.

The other, equally valid answer to the question of why a community might choose a growth phasing program over an adequate public facilities one is that growth phasing addresses a different issue. Greenberg cited a survey of citizens in Livermore early in the growth management period in which 74 percent of those surveyed agreed with the statement that "Livermore should grow at a controlled rate, provided services to the residents do not suffer" (1986, p. 321). Note the two parts to that response: (1) protect service levels, and (2) control the rate of growth. Adequate public facilities standards would ensure the adequacy of services, but in a year when systems enjoyed adequate capacities, such controls might not slow the rate of growth. A phased growth system addresses both issues.

The perceived simplicity of the growth phasing programs does not necessarily translate into simplicity in operation. Most growth phasing programs, including all of those described here, are added to the development review process as additional permitting steps. In com-

the proposal as closely as possible to concepts of the "public health and safety" will improve its defensibility (see, for example, Staff of the U.S. General Accounting Office 1978).

However, the real purpose of a growth phasing program may be to prevent "sprawl" and the changes in urban form and negative perceptions that go with it. In one survey of communities with development timing controls (loosely defined there to include subdivision regulations and capital investment strategies), 78 percent of the respondents mentioned "reduction of urban sprawl" as an objective of the development timing strategy. That purpose tied with "environmental protection" for second place, trailing only "provision of adequate urban services," which was mentioned by 84 percent of the respondents (Brower et al. 1976, p. 109). The prevention of sprawl may be just as valid a goal as the protection of capacity in public facilities, but it is quite a different one.

As the Montgomery County program, described later, demonstrates, it is also possible to combine more than one type of program.

This section has distinguished between growth phasing programs that attempt to phase the location of growth and those like the one in San Jose that control the timing of growth through specific numerical permit limits. Obviously such a distinction is largely significant over the short run; over the long run, the issues are interrelated. The practical question in most cases is when a particular piece of land will be developed. That question contains both the issues of timing and location. Although the Ramapo program, with its eighteen-year plan, was based on timing, some land was immediately available and some was not; thus, at every stage it included location as well as timing controls. Viewed from a community level rather than a neighborhood level, the San Jose growth management program for Evergreen is purely a locational program. That program limits development within one part of the city but does not limit it elsewhere. Viewed at a neighborhood level, considering Evergreen as the neighborhood, it is a timing program which paces development in the area based on the capacity of the road system to handle growth. In short, the issues of timing and location are in one sense separate but in many other ways closely related.

The effect of a growth phasing program on growth is not complex if the community implements the program as planned. As Snyder (1982) noted in commenting on the Westminster requirements for adequate public facilities, "Although the location of development is never predetermined by the City, it is economically advantageous to the developer to locate either contiguous to the city or within the city in the role of an infill development" (p. 248).

Growth patterns and timing may not be entirely predictable with

an adequate public facilities program, but they should be reasonably predictable (or at least the maximums should be reasonably predictable) with a growth phasing program.

URBAN GROWTH BOUNDARIES

As the name suggests, an urban growth boundary is a line drawn around a city to define the limits of urban growth. It is a kind of growth phasing program. Some phasing programs, such as the one in Clarkstown, attempt to phase growth by limiting all growth or more intense growth, to a particular area of the community at particular time. The earliest form of growth management in Boulder was a "blue line" around the city, drawn at an elevation (5,750 feet) beyond which water service could not conveniently be offered; served the incidental, but not unintentional, purpose of limiting growth up the side of the mountains that provide a backdrop for the city (Snyder 1982, pp. 148-150).

An urban growth boundary, as the term is used here, however, is more rigid than a simple phasing program. Boulder later created another form of urban growth boundary through its acquisition of publicly owned greenbelt that almost completely surrounded the city by 1992 (Boulder, City of 1991; see discussion in Chapter 5). Because the Boulder charter makes it difficult for the city to sell the open space, the boundary is likely to remain stable.

The primary source of most rigid urban growth boundaries is the state. In Hawaii, the state has created a form of statewide zoning under which it designated urban, rural, conservation, and agricultural districts (described in Chapter 6). Although the boundaries have been subject to surprisingly frequent change, they are still far more rigid than any locally drawn lines on a zoning or growth management map have proved to be. Even after the changes, the program has served its purpose by restricting 95 percent of the state's land to agricultural and conservation uses (Callies 1992; see, generally, Chapter 6).

Oregon took another approach in its state law. It required that local governments prepare local plans and implementation strategies that included twenty-year growth boundaries. Thus, since the mid-1970s, communities in Oregon have had urban growth boundaries. The Oregon program is described in more depth in Chapter 6.

Establishing an urban growth boundary requires either a very self-centered attitude for a community or an enormous amount of foresight. Because population growth trends change so much over time, it is difficult to imagine accurately projecting the land area needed for growth over a twenty-year period. Knaap has noted the significant

Table 4.1

Permitted Growth in Petaluma at 500 Dwelling Units per Year Compared to Actual Growth, 1970-90

	1970	1980	1990
Cumulative units allowed by program	N.A.	13,175	18,175
Actual total units	8,175	12,540	16,546
Cumulative difference	N.A.	635	1,729

Sources: Actual number of units from Bureau of the Census, 1991, *Census of Population and Housing: Summary Population and Housing Characteristics*, Part 6, Table 18; Bureau of the Census, 1982, *Summary Characteristics by Governmental Units and Standard Metropolitan Statistical Areas*, Part 6, Table 2; Bureau of the Census, 1972, *City and County Data Book*, Table B-2; other lines computed by author.

luma had experienced constant growth that surged to an annual rate of 10 percent by 1971. In the face of this last spurt of growth, Petaluma adopted the first stage in its growth control program—a moratorium on rezonings, followed by a moratorium on annexations. In August 1972, the city adopted a "Residential Development Control System" that was the predecessor of the "Residential Growth Management Program" that remains in place in 1992.

The Petaluma program is relatively simple. It provides an allocation of 500 new residential units per year, with suballocations between two sides of town and between single-family and multifamily housing. It is noteworthy that, based on the population at the time of the original program's adoption, 500 units represented a maximum annual growth rate of more than 5 percent; by 1991, the effective rate limit was closer to 3.5 percent. That computation is of more academic than practical significance, however, because Petaluma's growth did not approach the maximum permissible rate in the 1980s as Table 4.1 shows. In 1990, the city had 16,546 dwelling units, compared to 12,540 in 1980. Without regard to several exemptions that would have permitted more units, the basic program would have permitted growth to 17,540 dwelling units by 1990.

It is important to recall that in a suit filed by homebuilders the federal district court examined the Petaluma program and found

effects of the rigidity of the Portland boundary on the land market (Knaap 1985, see discussion in Chapter 10).

An urban growth boundary establishes a clearer "urban edge" than other forms of growth management. In doing so, it puts a limit to continuous urban sprawl. On the other hand, it seems more likely than other forms of growth management to spur leapfrog, or discontinuous, development beyond the boundary (see Figure 7.1 and the description of such effects from the Boulder program in Chapter 7).

Note that an urban growth boundary addresses urban form but does not directly address the issues of adequacy of public facilities or even the fiscal impacts of growth. Presumably, constraining development within a limited boundary will lead to reduced capital and operating costs, thus minimizing negative fiscal impact on the community, but recent studies do not wholly support that conclusion. Further, urban growth boundaries do not necessarily regulate the timing of growth within that boundary. A phased growth system may suggest a series of concentric boundaries, with growth gradually moving out through them, thus facilitating the gradual expansion of public facilities. The establishment of long-term growth boundaries like those in Boulder and Portland does not provide a basis for planning the orderly expansion of public facilities in the early years, because there is then far more undeveloped land within the boundary than a community can or should serve with major roads and public utilities.

In short, urban growth boundaries address exactly what they appear to address. They limit the long-range boundaries of urban growth and do little else. They can, of course, be used in conjunction with other techniques. However, it is important to remember that these boundaries do not directly address issues such as heavy traffic, overcrowded schools, or overloaded public services that typically lead to the adoption of growth management programs.

RATE-OF-GROWTH PROGRAMS

An adequate public facilities requirement may effectively regulate the rate of growth of a community, based on the actual capacity of public facilities at any given time. Some growth phasing programs, such as the San Jose program described earlier in this chapter, may translate the availability of public facilities into a maximum permissible growth rate in any given year. However, a few communities regulate the rate of growth directly.

The two primary examples are programs in Petaluma, California, described in Chapter 3, and in Boulder, Colorado, which based its program on the Petaluma program. As described in Chapter 3, Petaluma

Table 4.2
Permitted Growth in Boulder at 2 Percent per Annum, Compared to Actual
Growth, with Boulder County as Reference, 1970-90

	1970	1980	1990
CITY OF BOULDER			
Actual population	66,870	76,685	83,312
Projected population with 2 percent annual increase (1970 base)	N.A.	81,516	99,366
Projected population with 2 percent annual increase (1980 base)	N.A.	N.A.	93,471
BOULDER COUNTY			
Actual population	131,899	189,625	225,339
Projected population with 2 percent annual increase (1970 base)	N.A.	160,784	195,997
Projected population with 2 percent annual increase (1980 base)	N.A.	N.A.	231,153

Sources: Actual population data from Bureau of the Census, 1991, *Census of Population and Housing: Summary Population and Housing Characteristics*, Part 7, Tables 15 (county) and 16 (city); Bureau of the Census, 1981, *Census of the Population: Characteristics of the Population, Chapter A, Number of Inhabitants*, Part 7, Tables 4 (county) and 5 (city); and Bureau of the Census, 1972, *Census of Population, Vol. 1, Characteristics of the Population*, Table 10; other lines computed by author.

that the city generally had adequate public facilities capacity and that it had "purposefully" limited its water supply. Although the city raised the issue of public facilities in defending its program, clearly the city has never based the limits imposed by the program on the adequacy of public facilities. Even without the detailed analysis by the federal court, one could easily deduce that it is very unlikely that the combination of roads, sewer, water, and schools in a community would be able to absorb exactly 500 new residential units each year for nearly twenty years. Clearly the remaining capacity of such systems is "lumpy," becoming extremely limited at times and then increasing dramatically as a new plant or major trunk line or road is added to the system (see discussion of this concept in Dubbink 1983, pp. 176-179).

The Boulder program was a second-generation version of the Petaluma one. Boulder adopted its first program in 1976, four years after adoption of the program in Petaluma. The original version of the plan resulted from a citizen initiative and was named the Danish plan after citizen activist and later city council member, Paul Danish. The original plan imposed an annual limit of 1.5 percent on the increase in the number of dwelling units in the city; the current plan allows a growth rate of 2 percent. During the early years of the growth management program, Boulder even hired the Petaluma planning director as its own.

As in Petaluma, public facility capacity is not the basis for the Boulder growth limit. In a court challenge to a related city policy (but not to the growth management program itself), the Colorado Supreme Court sustained a lower court ruling that required the city to provide sewer and water service to land outside the city limits for which the city had denied service on the basis of its growth policy.⁴ The case is discussed in Kelly (1976). There was no indication in the findings in the case that the city was unable to serve the developer. The Boulder program remains in effect in 1992. As in Petaluma, actual growth in the city has remained below the rate permitted by the program (see Table 4.2). Although there growth has shifted to other areas of the county, the total growth in the county has also remained below the city's 2 percent annual growth goal.

Presumably a program like the one in the Evergreen Area of San Jose, in which public officials adjust the growth limit annually, based on actual capacity, should be tied more closely to actual service capacities. Perhaps the one in Evergreen is. However, in observing a similar system in operation in San Juan Capistrano, Dubbink noted that a technical report prepared by the local planning staff seemed to be largely irrelevant to the actual decision about growth allocation for the year:

My impression was that the technical findings of the report had long been eclipsed by the hours of public hearings associated with setting San Juan's yearly growth quota. This seemed to be an essentially political event where the unrest of the protectionists was balanced against the unrest of those with land to develop and the costs of extending services was balanced against the cost of litigation for withholding them (Dubbink 1983, p. 129).

It is interesting that Boulder and Petaluma have taken separate but similar steps to simplify their programs. Both originally included "merit" reviews, in which development projects competed for scarce permits through complex and comprehensive reviews that awarded "points" for quality of architectural design, site planning, energy conservation and a multitude of other issues, with building opportunities in tight years allocated to those projects achieving the most points (see, generally, James Duncan and Associates and Kelly 1991a; the Boulder point program is described in Cooper 1986). Both Boulder and Petaluma amended their programs in the 1980s to simplify proration programs, requiring very little administration and greatly reducing the burden on private developers. Under the simplified programs, each city simply divides the available permits in a particular period prorata among the competing developers.

In a question-and-answer format in its *Residential Growth Management System: User's Guide*, Petaluma noted succinctly that: "The biggest difference between the present system and its predecessor is the elimination of the point system used to rate projects to determine whether or not they qualified for allotments. That process had become a burden for both staff and the developer, and had been regularly criticized for being too subjective in its scoring procedure" (Petaluma, City of 1991, not paginated, Chapter 3, answer to question 2).

A background memorandum prepared by the Boulder planning director to explain the revised program to the Boulder City Council similarly noted that the pro-rated allocation method was a change "made at Planning Board, based upon the almost unanimous support for the sole use of the prorated method by the building community" (Gawf 1985, p. 1). A Boulder builder, complaining of the "hassle involved, . . . the time to process a development, [and] the complexity of the ordinances," helps to explain the support for the simpler program in comments about the old program:

The growth control ordinance tries to deal with issues of quality in a quantitative way — by putting numbers on things and saying, "You can only do this and that at this or that rate." It is impossible to deal with qualitative issues in a quantitative way; this practice, quite simply, detracts from good planning. The experience in Boulder has been that the planning department has

deteriorated in quality because it has had to concentrate on counting numbers and on administering a highly bureaucratic system. Boulder's is not a lousy planning department — its staff members are good planners. Perhaps under the newest system, they will even be able to get back to planning (Leach 1986, p. 35).⁵

Clearly the political and philosophical basis for a rate-of-growth program is quite different from the pragmatic ones that lead to adoption of adequate public facilities controls. The author of the original Boulder program noted in an article that

The first attempt to pass a growth control ordinance in Boulder came about in 1971, when the Boulder chapter of Zero Population Growth (ZPG) put a proposed dwelling-unit cap of 40,000 to a vote by the initiative process. This move sufficiently frightened the prevailing local establishment that the latter persuaded the city council to put an alternative advisory question on the ballot, urging the city government to keep the growth rate "substantially below the rates experienced during the 1960s" (Danish 1986, p. 27).

It is interesting, but not particularly surprising, to note that this proposal from Zero Population Growth in Boulder came at a time when the studies for the Club of Rome Report (Meadows et al. 1972) and the Douglas Commission Report (Commission on Population Growth and the American Future 1972) were under way and just a year before Finkler's publications on "non-growth" planning options appeared (1972, 1973). The timing of this early proposal, as well as the ultimate program itself, illustrates the significant difference in apparent motivations behind rate-of-growth programs and other growth management programs that are more clearly based on community growth capacity. Although Boulder voters did not pass "the Danish plan," as it was often called, until 1976 and although it sprang from the roots of the city's own advisory question on the 1971 ballot and not from the ZPG proposal, the concerns addressed were clearly the same: the actual rate of growth or change in the community. Even if there was plenty of water and a substantial excess of sewage treatment capacity, the majority of people in Boulder simply felt that a 5 percent annual growth rate represented too much change (note that this is half the annual growth rate that preceded the adoption of the Petaluma program). Although any growth management program is likely to slow the rate of growth at certain times, Snyder (1982) illustrated the difference between the types of programs. In contrasting Westminster and Boulder, twenty miles to the north, he found continuing acceleration in the rate of growth during the early years of the Westminster program and a dramatic slowing of the rate of growth in the early years of the Boulder program (pp. 286–288).

COMPREHENSIVE PROGRAMS

Most of the programs cited so far, and in fact most of the programs in effect, are not comprehensive programs of managing community change but single regulatory tools directed at particular local issues. The Boulder and Petaluma programs address the rate-of-growth issue without particular regard to the availability of public facilities, while adequate public facilities controls address only the public facilities issues. The programs in San Jose, Boulder, Livermore, and Petaluma regulate only residential growth.

Although some of these programs operate as part of a larger plan, many do not. A 1991 national survey of seventeen communities (an eighteenth was the control) regarded as "growth management communities" found that

- only three of them had both development timing requirements and adequate public facilities ordinances (Boulder, Livermore, and Westminster);
- three of the communities had neither;
- two had only development timing controls, and nine had only adequate public facilities controls;
- the control community, Montgomery County, Maryland, had both (James Duncan and Associates and Kelly 1991c).

Note that the response of Livermore to the question was somewhat deceptive, because its development timing control is its adequate public facilities ordinance. Thus from the surveyed group, a group identified as communities with some sort of active growth management program, only Westminster, Boulder, and Montgomery County clearly had programs with both adequate public facilities and development timing elements in 1991; in Boulder, the timing requirements apply only to residential uses, although in Westminster and Montgomery County they apply to most land uses.

Boulder provides a useful illustration. The city council adopted its adequate public facilities requirements separately from the growth management program in 1977, and they remain separate from the growth management program (James Duncan and Associates and Kelly 1991c). The city has engaged in joint planning with Boulder County for more than two decades. It has actively used its control of crucial public facilities in fringe areas as a control tool (see, generally, early discussion of *Robinson* and Chapter 5; as well as specific discussions of Boulder in Gleeson et al. 1975, pp. 10-11; also, Cooper 1986; Lewis 1990). It has also invested millions of dollars of dedicated sales tax revenues in the acquisition of a large greenbelt

around the community, to halt urban sprawl and to limit the encroachment of other communities into the area (Cooper 1986; also, Walker 1978; program described in last section of Chapter 5).

The Westminster program is the simpler of the two comprehensive growth management programs. It measures the capacity of the community to provide service at a given time in "service commitments" — one service commitment being equal to the system demand imposed by a single-family detached home. The city council, on the basis of recommendations of staff, annually determines the capacity of the city to provide service for the following year and then allocates that capacity among six categories of potentially competing users: (A) active residential projects; (B) other residential projects; (C) nonresidential projects; (D) service contracts with users outside the city; (E) other projects, including government-sponsored housing and some very small project exceptions; and (F) contingency and public use (Westminster, City of 1990).

The city created the two categories of residential uses in the original program in 1977 to give preference to partially-built but still active projects, for three reasons: first, developers of such projects clearly had the most current commitment to their projects and thus would suffer the greatest harm if stopped; second, such developers were the most certain to use the allocations promptly, thus providing needed "tap fee" revenues to the city; and, third, the city wanted to reduce as rapidly as possible the backlog of approved but partially-built projects (see, generally, earlier discussion, and Westminster, City of 1978b; Kelly 1982). Category E included in the program a reserve for allocations that are the subject of exemptions in other programs such as those in Boulder and Petaluma. Within Category C, economic base industries received a high priority. Snyder (1982) found several years later that Westminster had achieved significant success in attracting new jobs (pp. 219-222).

In Westminster, as in Petaluma and Boulder, growth pressures from the mid-1980s into the early 1990s fell far below those of the past and thus below the growth permitted under the programs; thus, the program has not been subject to significant recent pressure. Like the programs in Petaluma, Ramapo, and elsewhere, however, it was challenged in court. The city won in each of the challenges (for discussion of all the challenges, see Kelly 1982; the principal case was decided by the Colorado Supreme Court in 1982).⁶

Unlike many other communities involved in growth management, Montgomery County, Maryland, containing a number of northern suburbs of Washington, D.C., continued to grow rapidly through the 1980s and into the 1990s. The county thus continued to test the limits of its growth management program.

improvements in that area in order to accommodate the inevitable growth in ways compatible with the plan (pp. 125-126). Finally, the policy recommended increased coordination among governmental agencies influencing and serving growth—including multiple county agencies (pp. 127-135).

From that early planning document, Montgomery County has developed its annual growth policy into a sophisticated and complex regulatory tool. Simply adopting the policy is a relatively complex process that begins nine or ten months before a new policy will become effective. The county bases its capital investments on the growth policies, but the capital improvements program itself also affects the allocation of growth within the county (see, generally, Montgomery County Planning Board 1990b, pp. 13-20).

The growth management program divides the county into seventeen policy areas, and the annual policies phase growth differently for each area, on the basis of its capacity to absorb growth and other policy considerations. A key element in the program is the "staging ceiling" for each policy area, defined by the county as "the maximum amount of land development that can be accommodated by the existing and programmed public facilities serving the area, at an assigned level of service standard" (Montgomery County Planning Board 1990a, p. 4). Simply put, in computing public facilities capacity under its adequate public facilities policies, the county considers not only existing facilities but also those that the county has included in its adopted capital improvements program. That is a realistic policy approach, because development of most proposed projects will occur over a period of months or years after the approval date and such projects thus do not require all facility capacities immediately.

According to the *FY92 Annual Growth Policy*, as adopted by the planning board, the annual policy "tests the adequacy of four types of facilities: transportation; schools; water and sewerage facilities; and police, fire and health services" (Montgomery County Planning Board 1990b, p. 3). Sewer service was the most scarce resource and thus the critical determinant of the location of new growth in the original 1974 program, but by 1992 transportation had become the key element countywide (see, generally, Clancy 1986).

Another major element of the annual growth policy is a section establishing policies for the administration of the adequate public facilities requirements. Although such guidelines may not be necessary for sewer and water facilities, for which engineering computations can determine capacities, they are essential for other facilities for which the determination of capacity involves policy judgments. For example, a traffic level that is totally unacceptable in one community may be entirely acceptable in another, because the second

The "annual growth policy" is the key to the Montgomery County program. The county's planning board adopted the first such policy in 1974 (Montgomery County Planning Board). That policy document noted that it followed by ten years the adoption of a general plan intended "to provide for consolidated development with the least amount of sprawl, the most coordinated form of transportation, and the most accessible open space" (p. 34). It also noted that an adequate public facilities ordinance already applied to the subdivision process and that a limited "staging" (phasing) concept applied to plans for individual communities (p. 38). However, the 1974 report represented the first comprehensive approach to addressing growth in the booming suburban area. Serious limitations on sewage treatment capacity were a major concern in Montgomery County then, with additional capacity not expected to come on line for four years or more (pp. 52-53, 107-112). The report noted the existence of separate sewer capacity allocation policies and commented, "In summary, it seems reasonable to conclude that much of the growth rate of the suburban ring nodes in the next six years will be dependent upon whatever sewer allocation policy is established for the Rock Creek interim plant" (p. 111).

Although the later growth policy documents served as regulatory tools, the original one really updated the general plan. It reaffirmed the three goals of the plan:

- (1) To channel the bulk of long-range growth in the County to the I-270 corridor in the form of satellite cities which have both jobs and housing in a balanced ratio and which reduce travel demands.
- (2) To focus a more limited amount of growth in "nodal" areas, or activity centers, within the suburban ring.
- (3) To build a network of bus and rail transit lines to serve movements through this area and, in so doing, to reduce traffic congestion and air pollution (p. 117).

To implement those policies, it outlined a series of recommendations for both regulation and capital investment by the county. It specifically recommended construction of major highways and the Rockville treatment plant because, "Improving access to the corridor is the prime requisite to make it attractive to new jobs, and job increases there are the key to achievement of a balanced growth pattern in the corridor that can lessen auto travel needs and take the pressure off the suburban ring nodes" (p. 125).

The growth policy again acknowledged that most growth in the near future would take place in the area in which the county was allocating sewer capacity and thus recommended transit and other

community is willing to tolerate stop-and-go traffic at rush hour and the first is not. Montgomery County, for example, is willing to accept heavier projected traffic loads on roads near transit stations. Such a policy serves two purposes: it acknowledges that people driving to the train create local traffic, although they help to reduce regional traffic; second, and perhaps more important, it creates a situation in which road conditions make the use of mass transit more attractive.

Although raising some concerns about a new requirement for traffic impact projections for some development, a developer termed the Montgomery County program "strict but reasonable, and a known quantity" (Clancy 1986, p. 97).

There is more to the Montgomery County program than the pieces described here. The county implements its planning program, of which the growth policy is a major part, through a series of sector plans (for geographic sectors) and local master plans within the separate cities in the county. The 1992 growth policy itself identified interrelationships among a total of eight different sets of county policies: land use policy, economic policy, housing policy, transportation policy, community facilities policy, natural resources policy, social policy, and fiscal policy.

The county also has a program of traditional planning in established communities and an aggressive program to protect agricultural land. In Montgomery County, as in Boulder, the growth management program is simply one piece of a complex array of planning and development controls (Hamblen 1991).

No single growth management or other land use control technique can address all of the concerns of a rapidly growing community. Thus, a few communities with serious commitments to managed growth have adopted comprehensive programs consisting of multiple coordinated techniques addressing all types of new development.

THE ROLE OF EXACTIONS

"Make growth pay its own way" is a call heard perhaps more often than "manage growth" among citizens concerned with rising taxes and, in many cases, declining levels of service. In response to that call and to a variety of local fiscal pressures, by the early 1990s most local governments in growing areas had adopted broad policies for "exactions" through which developers are required to pay for the infrastructure improvements required by new growth.

Although most local governments have long required developers to pay for such on-site improvements as street paving and utility lines within a subdivision, exaction requirements go further. They may require that a developer improve a road leading up to a site or a

drainage way leading away from it. Traffic impact analyses may lead to requests (or demands) that a developer install a traffic light at an intersection near the development project or construct adjacent turning lanes to improve access into and out of the development. Through *impact fees* (the most common term, although there are many others), a community may assess a developer for a share of a larger facility, such as a major arterial roadway or a new sewer plant.

Clearly the subjects of exactions and growth management overlap in principle, in politics, and in practice. A comprehensive growth management program can and should include rational policies on exactions. However, far more communities have exaction policies than have growth management policies, and the two are typically adopted and administered separately.

Exactions, of course, have their own effects on urban form, the fiscal position of the municipality, and the availability of public facilities. Operationally those are quite separate, and sometimes quite different, from the effects of growth management. For example, a community may have an impact fee policy related to roads and also an adequate public facilities standard related to roads. Simply paying the impact fee may not guarantee the developer that there is sufficient road capacity to permit the proposed project, because financing of the project may depend on the payment of such fees by several developers.

The literature on exactions is broad. Some starting points for one who is interested would include books edited by Robinson (1990) and by Frank and Rhodes (1987). Nelson (1988) edited a comprehensive work on impact fees. Not everyone accepts exactions enthusiastically, in significant part because of the tendency for them to increase housing costs (see, generally, Babcock 1987).

OTHER REGULATORY TECHNIQUES

This chapter describes four major regulatory types of growth controls: adequate public facilities requirements, rate-of-growth controls, urban growth boundaries, and growth phasing regulations — along with examples of more comprehensive programs that include elements of more than one of those techniques.

Some analysts include more techniques under the general heading of "growth management." Schiffman listed twenty-six, including a number of zoning techniques, some nonregulatory techniques such as those discussed in the next chapter, and some other regulatory techniques that are simply not included here (1989). This book is limited to actions intended to direct the timing or location of growth or both. Other sources provide a thorough treatment of zoning and